CDX-C6850

SERVICE MANUAL

US Model
Canadian Model

SPECIFICATIONS

Model Name Using Similar Mechanism	CDX-C5750/C5850
CD Drive Mechanism Type	MG-363T-121
Optical Pick-up Name	KSS-521A

AUDIO POWER SPECIFICATIONS (US Model)
POWER OUTPUT AND TOTAL HARMONIC DISTORTION
17 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1% total harmonic distortion.

Other Specifications

CD player section

System	Compact disc digital audio system
Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit
Laser Diode Properties	
Material	GaAlAs
Wavelength	780 nm
Emission Duration	Continuous
Laser output power	Less than 44.6 µW*

* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.*

Tuner section

FM

Tuning range	87.5 – 107.9 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	10 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7% (stereo), 0.5% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

AM

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	30 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	40 W × 4 (at 4 ohms)

General

Outputs	Line outputs (2) Power antenna relay control lead Power amplifier control lead Telephone ATT control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 185 mm (7 1/8 × 2 × 7 3/8 in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 162 mm (7 1/4 × 2 1/8 × 6 1/2 in.) (w/h/d)
Mass	Approx. 1.2 kg (2 lb. 10 oz.)
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/AM COMPACT DISC PLAYER

MICROFILM

SONY®

SERVICE NOTE

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

NOTES ON PICK-UP FLEXIBLE BOARD

The pick-up flexible board in this set is secured to the optical pick-up with an adhesive tape. Once the tape is removed, an adhering force becomes weak, and it cannot be reused.
Therefore, if the optical pick-up is replaced, replace also the pick-up flexible board with a new one.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

TABLE OF CONTENTS

1. GENERAL
Location of controls 3
Getting Started 3
Setting the clock 3
CD Player 3
Radio 4
Other Functions 5
CD/MD Unit 6
TV/Video 7
Connections 8

2. DISASSEMBLY
2-1. Cover 10
2-2. Front Panel Assy 10
2-3. Sub Panel Assy 11
2-4. CD Mechanism Block 11
2-5. Main Board 12
2-6. Heat Sink 12
2-7. Chassis (T) Sub Assy 13
2-8. Lever Assy 13
2-9. Servo Board 14
2-10. Roller Assy 14
2-11. Chassis (OP) (O/S) Assy 15
2-12. Optical Pick-up Block 15

3. ELECTRICAL ADJUSTMENTS
Tuner Section 16
CD Section 19

4. DIAGRAMS
4-1. IC Pin Description 20
4-2. Block Diagram –CD Section– 23
4-3. Block Diagram –Main Section– 25
4-4. Circuit Boards Location 27
4-5. Printed Wiring Boards –CD Mechanism Section– 29
4-6. Schematic Diagram –CD Mechanism Section– 31
4-7. Printed Wiring Board –Main Section– 33
4-8. Schematic Diagram –Main Section (1/2)– 37
4-9. Schematic Diagram –Main Section (2/2)– 39
4-10. Printed Wiring Board –Display Section– 41
4-11. Schematic Diagram –Display Section– 43
4-12. Printed Wiring Board –Relay Section– 45
4-13. Schematic Diagram –Relay Section– 47

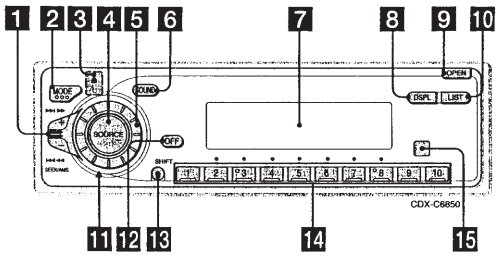
5. EXPLODED VIEWS
5-1. Chassis Section 52
5-2. Front Panel Section 53
5-3. CD Mechanism Section (1) 54
5-4. CD Mechanism Section (2) 55
5-5. CD Mechanism Section (3) 56

6. ELECTRICAL PARTS LIST 57

SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of controls



Refer to the pages for details.

1 **SEEK/AMS (seek/Automatic Music Sensor/manual search) control** **8, 10, 18, 20, 21**

2 **MODE (band/unit select) button** **9, 10, 17, 19, 21**

3 **⏏ (eject) button (located on the front side of the unit behind the front panel)** **7, 23**

4 **SOURCE (source select) button** **7, 9, 10, 16, 17, 19, 21, 22**

5 **Dial (volume/subwoofer volume/bass/treble/left-right/rear-front control)** **11, 14, 19**

6 **SOUND button 14**

7 **Display window**

8 **DSPL (display mode change) button** **8, 11, 12, 17, 19, 20**

9 **OPEN button 6, 7, 25**

10 **LIST button**
Station Memo **11, 22, 23**
Disc Memo **19**
List-up **12, 20**

11 **Reset button (located on the front side of the unit behind the front panel) 6**

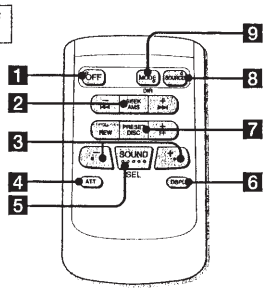
12 **OFF button 6, 7**

13 **SHIFT button**
PLAY MODE **9, 10, 20, 21**
REP **9, 18**
SET UP **7, 8, 15, 16, 17**
SHUF **9, 18**

14 **During radio reception:**
Number buttons 10
During CD/MD playback:
Direct disc selection buttons 18
During TV reception:
Number buttons 22

15 **Receptor for the optional wireless remote**

Optional wireless remote (RM-X47)



The corresponding buttons of the wireless remote control the same functions as those on this unit.

1 **OFF button**

2 **SEEK/AMS button**

3 **⊖ ⊕ buttons**

4 **ATT button**

5 **SOUND/SEL button**

6 **DSPL button**

7 **PRESET/DISC button**
You cannot perform manual search or manual tuning with the wireless remote.

8 **SOURCE button**

9 **MODE/DIR button**

Getting Started

Resetting the unit

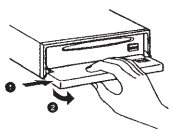
Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Remove the front panel and press the reset button with a pointed object, such as a ball-point pen.

Notes
- *Pressing the reset button will erase the clock setting and some memorized functions.*
- *When you connect the power supply cord to the unit or reset the unit, wait for about 10 seconds before you insert a disc. If you insert a disc within these 10 seconds, the unit will not be reset, and you will have to press the reset button again.*

Detaching the front panel

You can detach the front panel of this unit to protect the unit from being stolen.

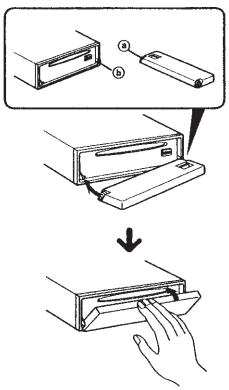
Before detaching the front panel, be sure to press (OFF). Press (OPEN), then slide the front panel to the right side, and pull out the left side.



Notes
- *Be sure not to drop the panel when detaching it from the unit.*
- *If you detach the panel while the unit is still turned on, the power will turn off automatically to prevent the speakers from being damaged.*
- *When carrying the front panel with you, use the supplied front panel case.*

Attaching the front panel

Place the hole ⓐ in the front panel onto the spindle ⓑ on the unit as illustrated, then push the left side in.



Notes
- *Be sure not to attach the front panel upside down.*
- *Do not press the front panel too hard against the unit when attaching it.*
- *Do not press too hard or put excessive pressure on the display window of the front panel.*
- *Do not expose the front panel to direct sunlight or heat sources such as hot air ducts, and do not leave it in a humid place. Never leave it on the dashboard of a car parked in direct sunlight or where there may be a considerable rise in temperature.*

Caution alarm

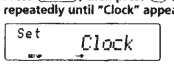
If you turn the ignition key switch to the OFF position without removing the front panel, the caution alarm will beep for a few seconds.
If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.

Setting the clock

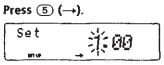
The clock uses a 12-hour digital indication.

Example: To set the clock to 10:08

1 Press (SHIFT), then press (3) (SET UP) repeatedly until "Clock" appears.



❶ **Press (5) (→).**

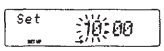


The hour indication flashes.

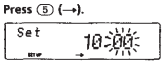
❷ **Set the hour.**

to go backward

to go forward



❸ **Press (5) (→).**

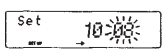


The minute indication flashes.

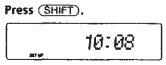
❹ **Set the minute.**

to go backward

to go forward



2 Press (SHIFT).



The clock starts.

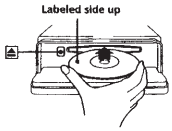
3 Press (SHIFT).
After the clock setting is complete, the display returns to normal playback mode.

CD Player

Listening to a CD

1 Press (OPEN) and insert the CD.

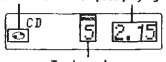
Labeled side up



2 Close the front panel.
Playback starts automatically.

If a CD is already inserted, press (SOURCE) repeatedly until "CD" appears to start playback.

CD indication **Elapsed playing time**



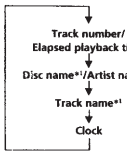
Track number

Note
To play back an 8 cm (3 in.) CD, use the optional Sony compact disc single adapter (CSA-8).

To	Press
Stop playback	(OFF)
Eject the CD	(OPEN) then ⏏

Changing the display item

Each time you press (DSPL) during CD or CD TEXT disc playback, the item changes as follows:



*1 *If you inserted a non-CD TEXT disc, "NO D.Name" appears in the display.*
*2 *If you play a CD TEXT disc, the artist name appears in the display after the disc name. (Only for CD TEXT discs with the artist name.)*

After you select the desired item, the display will automatically change to the Motion Display mode after a few seconds.
In the Motion Display mode, all the above items are scrolled in the display one by one in order.

Tip
The Motion Display mode can be turned off. (See "Changing the sound and display settings" on page 15).

Automatically scrolling a disc name
— Auto Scroll

If the disc name, artist name, or track name on a CD TEXT disc exceeds 10 characters and the Auto Scroll function is on, information automatically scrolls across the display as follows:
- *The disc name appears when the disc has changed (if the disc name is selected).*
- *The track name appears when the track has changed (if the track name is selected).*

If you press (DSPL) to change the display item, the disc or track name of the CD TEXT disc is scrolled automatically whether you set the function on or off.

1 During playback, press (SHIFT).

2 Press (3) (SET UP) repeatedly until "A.Scrl" appears.

3 Press (5) (→) to select "A.Scrl on."

4 Press (SHIFT).

To cancel Auto Scroll, select "A.Scrl off" in step 3 above.

Note
For some CD TEXT discs with very many characters, the following cases may happen:
— Some of the characters are not displayed
— Auto Scroll does not work.

Tip
To manually scroll the long name of a CD TEXT disc after activating the Auto Scroll function, press (SHIFT), then (2) (←) (manual scroll).

Locating a specific track
— Automatic Music Sensor (AMS)

During playback, push the SEEK/AMS control up or down and release for each track you want to skip.

To locate succeeding tracks

To locate preceding tracks

Locating a specific point in a track
— Manual Search

During playback, push the SEEK/AMS control up or down and hold. Release when you have found the desired point.

To search forward

To search backward

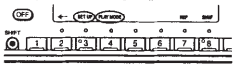
Note
If "└└└└└" or "┌┌┌┌┌" appears in the display, that means you have reached the beginning or the end of the disc and you cannot go any further.

Playing a CD in various modes

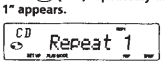
You can play CDs in various modes:
- Repeat (Repeat Play) repeats the current track.
- Shuf (Shuffle Play) plays all the tracks in random order.

Playing tracks repeatedly
— Repeat Play

1 During playback, press (SHIFT).
Every time you press (SHIFT), only the items you can select light up.



2 Press (7) (REP) repeatedly until "Repeat 1" appears.



Repeat Play starts.

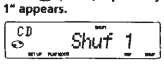
3 Press (SHIFT).

To return to normal playback mode, select "Repeat off" in step 2 above.

Playing tracks in random order
— Shuffle Play

1 During playback, press (SHIFT).

2 Press (8) (SHUF) repeatedly until "Shuf 1" appears.



Shuffle Play starts.

3 Press (SHIFT).

To return to normal playback mode, select "Shuf off" in step 2 above.

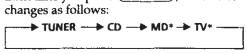
Radio

Memorizing stations automatically
— Best Tuning Memory (BTM)

The unit selects the stations with the strongest signals and memorizes them in the order of their frequencies. You can store up to 10 stations on each band (FM1, FM2, and AM).

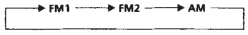
Caution
When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

1 Press (SOURCE) repeatedly to select the tuner.
Each time you press (SOURCE), the source changes as follows:



** If the corresponding optional equipment is not connected, this item will not appear.*

2 Press (MODE) repeatedly to select the band.
Each time you press (MODE), the band changes as follows:



3 Press (SHIFT), then press (4) (PLAY MODE) repeatedly until "B.T.M" appears.

4 Press (5) (→).
The unit stores stations in the order of their frequencies on the number buttons.
A beep sounds when the setting is stored.

5 Press (SHIFT).

Notes
- *The unit does not store stations with weak signals. If only a few stations can be received, some number buttons will retain their former setting.*
- *When a number is indicated in the display, the unit starts storing stations from the one currently displayed.*
- *If a CD is not in the unit, only the tuner band appears even if you press (SOURCE).*

Memorizing only the desired stations

You can preset up to 20 FM stations (10 each for FM1 and 2), up to 10 AM stations in the order of your choice.

1 Press (SOURCE) repeatedly to select the tuner.

2 Press (MODE) repeatedly to select the band.

3 Push the SEEK/AMS control up or down to tune in the station that you want to store on the number button.

4 Press and hold the desired number button ((1) to (10)) until "MEM" appears.
The number button indication appears in the display.

Note
If you try to store another station on the same number button, the previously stored station will be erased.

Receiving the memorized stations

1 Press (SOURCE) repeatedly to select the tuner.

2 Press (MODE) repeatedly to select the band.

3 Press the number button ((1) to (10)) on which the desired station is stored.

If you cannot tune in a preset station

Push and release the SEEK/AMS control up or down to search for the station (automatic tuning).
Scanning stops when the unit receives a station. Push the SEEK/AMS control up or down repeatedly until the desired station is received.

Note
If the automatic tuning stops too frequently, press (SHIFT), then press (4) (PLAY MODE) repeatedly until "Local" (local seek mode) is displayed. Then press (5) (→) to select "Local on." Press (SHIFT). Only the stations with relatively strong signals will be tuned in.

Tip
If you know the frequency of the station you want to listen to push the SEEK/AMS control up or down and hold until the desired frequency appears (manual tuning).

If FM stereo reception is poor
— Monaural Mode

1 During radio reception, press (SHIFT), then press (4) (PLAY MODE) repeatedly until "Mono" appears.

2 Press (5) (→) repeatedly until "Mono on" appears.
The sound improves, but becomes monaural ("ST" disappears).

3 Press (SHIFT).

To return to normal mode, select "Mono off" in step 2 above.

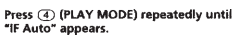
If interference occurs during FM reception

If there is interference from neighboring stations, follow the steps below and select "Narrow". If interference is not a problem, select "Wide" to maximize signal reception and improve sound quality or "IF Auto" to switch between "Narrow" and "Wide" automatically.

1 Press (SHIFT) during FM reception.

2 Press (4) (PLAY MODE) repeatedly until "IF Auto" appears.

3 Press (5) (→) repeatedly to select desired setting.



4 Press (SHIFT).

Changing the display item

Each time you press (DSPL), the item changes as follows:
Frequency ↔ Clock

After you select the desired item, the display will automatically change to the Motion Display mode after a few seconds.
In the Motion Display mode, all the above items are scrolled in the display one by one in order.

Tip
The Motion Display mode can be turned off. (See "Changing the sound and display settings" on page 15).

Storing the station names
—Station Memo

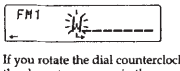
You can assign a name to each radio station and store it in memory. The name of the station currently tuned in appears in the display. You can assign a name of up to eight characters per station.

Storing the station names

1 Tune in a station whose name you want to store.

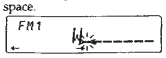
2 Press (LIST) for two seconds.

3 Enter the characters.
❶ Rotate the dial clockwise to select the desired characters.
(A → B → C → ··· Z → 0 → 1 → 2 → ··· 9 → + → − → * → / → \ → > → < → . → _)



If you rotate the dial counterclockwise, the characters appear in the reverse order.
If you want to put a blank space between characters, select "_" (under-bar).

❷ Press (5) (→) after locating the desired character.
The flashing cursor moves to the next space.



If you press (2) (←), the flashing cursor moves to the left.

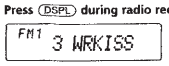
❸ Repeat steps ❶ and ❷ to enter the entire name.

4 To return to normal radio reception, press (LIST) for two seconds.

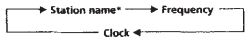
Tip
To erase or correct a name, enter "_" (under-bar) for each character.

Displaying the station name

Press (DSPL) during radio reception.



Each time you press (DSPL), the item changes as follows:



** If the station name of a station is not stored, "NO Name" appears in the display for one second.*

Erasing the station name

1 Tune in any station and press (LIST) for two seconds.

2 Press (DSPL) for two seconds.

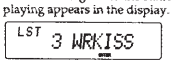
3 Rotate the dial to select the name that you want to erase.

4 Press (6) (ENTER) for two seconds.
The name is erased.
Repeat steps 3 and 4 if you want to erase other names.

5 Press (LIST) for two seconds.
The unit returns to the normal radio reception mode.

Locating a station by name — List-up

1 Press (LIST) momentarily.
The name assigned to the station currently playing appears in the display.



2 Press (LIST) repeatedly until you find the desired station.

3 Press (6) (ENTER) to tune in the desired station.

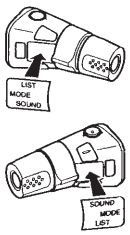
Note
Once the station name or frequency has been displayed for five seconds, the display goes back to its normal mode. To turn off the display, press (DSPL).

Other Functions

You can connect an optional rotary commander (RM-X4S) with this unit.

Labeling the rotary commander

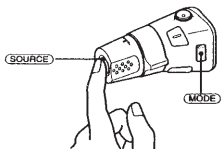
Depending on how you mount the rotary commander, attach the appropriate label as shown in the illustration below.



Using the rotary commander

The rotary commander works by pressing buttons and/or rotating controls.
You can also control optional CD or MD units with the rotary commander.

By pressing buttons (the SOURCE and MODE buttons)

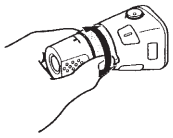


Each time you press (SOURCE), the source changes as follows:
TUNER → CD → MD* → TV*

** If the corresponding optional equipment is not connected, this item will not appear.*

Pressing (MODE) changes the operation in the following ways;
- **Tuner: FM1 → FM2 → AM**
- **CD unit: CD1 → CD2 → ...**
- **MD unit: MD1 → MD2 → ...**
- **TV/Video: TV → Video1 → Video2**

By rotating the control (the SEEK/AMS control)



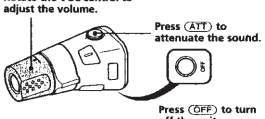
Rotate the control and release it to:
- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to find a specific station.

By pushing in and rotating the control (the PRESET/DISC control)

Push in and rotate the control to:
- Receive the stations memorized on the number buttons.
- Change the disc.

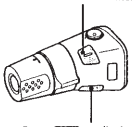
Other operations

Rotate the VOL control to adjust the volume.



continue to next page →

Press (SOUND) to adjust the volume and sound menu.

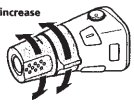


Press (LIST) to display the memorized names.

Changing the operative direction

The operative direction of controls is factory-set as shown below.

To increase



To decrease

If you need to mount the rotary commander on the right hand side of the steering column, you can reverse the operative direction.

Press (SOUND) for two seconds while pushing the VOL control.

Tip
You can also change the operative direction of these controls with the unit (page 15).

Adjusting the sound characteristics

You can adjust the bass, treble, balance, and fader.
You can store the bass and treble levels independently for each source.

1 Select the item you want to adjust by pressing (SOUND) repeatedly.

VOL (volume) → SUB (subwoofer volume) → BAS (bass) → TRE (treble) → BAL (left-right) → FAD (front-rear)

2 Adjust the selected item by rotating the dial.
Adjust within three seconds after selecting the item. (After three seconds, the dial function reverts to volume control.)

Attenuating the sound

Press (ATT) on the optional rotary commander or wireless remote.
"ATT on" flashes momentarily.

To restore the previous volume level, press (ATT) again.

Tip
The unit decreases the volume automatically when a telephone call comes in (Telephone ATT function).

Changing the sound and display settings

The following items can be set:
- Clock (page 7).
- D.Info (Dual Information) - to display the clock and the play mode at the same time (ON) or to display the information alternately (OFF).
- Amber/Green - to change the illumination color to amber or green.
- Dimmer - to change the brightness of the display.
  — Select "on" to dim the display.
- Contrast - to adjust the contrast if the indications in the display are not recognizable because of the unit's installed position.
- Beep - to turn on or off the beeps.
- RM (Rotary Commander) - to change the operative direction of the controls of the rotary commander.
  — Select "norm" to use the rotary commander as the factory-set position.
  — Select "rev" when you mount the rotary commander on the right side of the steering column.
- Loud (Loudness) - to enjoy bass and treble even at low volume. The bass and treble will be reinforced.
- HPF (High Pass Filter).
- LPF (Low Pass Filter).
- M.dspl (Motion display) - to turn the motion display 1, 2, or off.
- A.Scrl (Auto Scroll) (page 8, 17).

Note
If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be disabled.

1 Press (SHIFT).

2 Press (3) (SET UP) repeatedly until the desired item appears.

Each time you press (3) (SET UP), the item changes as follows:
Clock → D.Info* → Amber/Green → Dimmer → Contrast → Beep → RM → Loud* → HPF* → LPF* → M.dspl → A.Scrl*

** When no CD or MD is playing, this item will not appear.*

Note
The displayed item will differ depending on the source.

3 Press (5) (→) to select the desired setting (Example: on or off).
For the "Contrast" setting, pressing (5) (→) makes the contrast higher, and pressing (2) (←) makes the contrast lower.

4 Press (SHIFT).
After the mode setting is complete, the display returns to normal playback mode.

Adjusting the frequency of the speakers and the subwoofer(s)

By setting the cut off level of unwanted frequency signals, the speakers connected to the output terminal and/or the subwoofer(s) connected to the sub out terminal will out put a cleare sound image.

Adjusting the frequency of the speakers connected from the output terminal

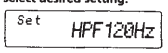
— High Pass Filter (HPF)

To match the characteristics of the connected speakers from the output terminal, you can cut out the unwanted low frequency signals entering the speakers.

1 Press (SOURCE) to select a source (radio, CD, or MD).

2 Press (SHIFT), then press (3) (SET UP) repeatedly until "HPF" appears.

3 Press (5) (→) or (2) (←) repeatedly to select desired setting.



Each time you press (5) (→) or (2) (←), the cut-off frequency in the display changes as follows:

HPF OFF ⟷ HPF 80 Hz ⟷ HPF 120 Hz

4 Press (SHIFT).
When the frequency setting is complete, the display returns to the normal playback mode.

Adjusting the frequency of the subwoofer(s)

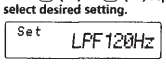
— Low Pass Filter (LPF)

To match the characteristics of the connected subwoofer(s), you can cut out the unwanted high and middle frequency signals entering the subwoofer(s).

1 Press (SOURCE) to select a source (radio, CD, or MD).

2 Press (SHIFT), then press (3) (SET UP) repeatedly until "LPF" appears.

3 Press (5) (→) or (2) (←) repeatedly to select desired setting.



Each time you press (5) (→) or (2) (←), the cut-off frequency in the display changes as follows:

LPF OFF ⟷ LPF 80 Hz ⟷ LPF 120 Hz

4 Press (SHIFT).
When the frequency setting is complete, the display returns to the normal playback mode.

With Optional Equipment
CD/MD Unit

This unit can control a maximum of seven external CD/MD units in this configuration:
CD unit - maximum of five
MD unit - maximum of five.
Any combination up to seven will work.
If you connect an optional CD unit with the CD TEXT function, the CD TEXT information will appear in the display when you play a CD TEXT disc.

Playing a CD or MD

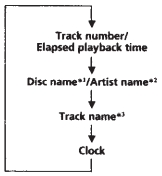
1 Press (SOURCE) repeatedly to select CD or MD.

2 Press (MODE) until the desired unit appears.
CD/MD playback starts.

When a CD/MD unit is connected, all the tracks play from the beginning.

Changing the display item

Each time you press (DSPL) during CD, CD TEXT, or MD playback, the item changes as follows:



*1 *If you have not labeled the disc or if there is no disc name prerecorded on the MD, "NO D.Name" appears in the display.*
*2 *If you play a CD TEXT disc, the artist name appears in the display after the disc name. (Only for CD TEXT discs with the artist name.)*
*3 *If the track name of a CD TEXT disc or MD is not prerecorded, "NO T.Name" appears in the display.*

You can label CD and CD TEXT discs with a personalized name using the disc memo function. Refer to "Labeling a CD" (page 19). However, if you use personalized labels, they will always take priority over the original CD TEXT information when such information is displayed.

Tip
If you want to display the original CD TEXT information after labeling the CD TEXT disc with a personalized name, press (SHIFT), then (5) (→).

After you select the desired item, the display will automatically change to the Motion Display mode after a few seconds.
In the Motion Display mode, all the above items are scrolled in the display one by one in order.

Tip
The Motion Display mode can be turned off. (See "Changing the sound and display settings" on page 15).

Automatically scrolling a disc name

— Auto Scroll

If the disc name, artist name, or track name on a CD TEXT disc or MD exceeds 10 characters and the Auto Scroll function is on, information automatically scrolls across the display as follows:
- *The disc name appears when the disc has changed (if the disc name is selected).*
- *The track name appears when the track has changed (if the track name is selected).*

If you press (DSPL) to change the display item, the disc or track name of the MD or CD TEXT disc is scrolled automatically whether you set the function on or off.

1 During playback, press (SHIFT).

2 Press (3) (SET UP) repeatedly until "A.Scrl" appears.

3 Press (5) (→) to select "A.Scrl on."

4 Press (SHIFT).

To cancel Auto Scroll, select "A.Scrl off" in step 3 above.

Note
For some CD TEXT discs with very many characters, the following cases may happen:
— Some of the characters are not displayed
— Auto Scroll does not work.

Tip
To manually scroll the long name of an MD or CD TEXT disc after activating the Auto Scroll function, Press (SHIFT), then (2) (←) (manual scroll).

Locating a specific track

— Automatic Music Sensor (AMS)

During playback, push the SEEK/AMS control up or down and release for each track you want to skip.

To locate succeeding tracks

To locate preceding tracks

Locating a specific point in a track

— Manual Search

During playback, push the SEEK/AMS control up or down and hold. Release when you have found the desired point.

To search forward

To search backward

Locating a disc by disc number

— Direct Disc Selection

Press the number button that corresponds with the desired disc number.
The desired disc in the current unit begins playback.

Playing tracks repeatedly

— Repeat Play

You can select:
- Repeat 1 - to repeat a track.
- Repeat 2 - to repeat a disc.

1 During playback, press (SHIFT).

2 Press (7) (REP) repeatedly until the desired setting appears.

Repeat 1 → Repeat 2 → Repeat off →

Repeat Play starts.

3 Press (SHIFT).

To return to normal playback mode, select "Repeat off" in step 2 above.

Playing tracks in random order — Shuffle Play

You can select:
- Shuf 1 - to play the tracks on the current disc in random order.
- Shuf 2 - to play the tracks in the current unit in random order.
- Shuf All - to play all the tracks in all the units in random order.

1 During playback, press (SHIFT).

2 Press (8) (SHUF) repeatedly until the desired setting appears.

Shuf 1 → Shuf 2 → Shuf All* → Shuf off →

Shuffle Play starts.

** "Shuf All" is available for CD changer (s) only.*

3 Press (SHIFT).

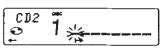
To return to normal playback mode, select "Shuf off" in step 2 above.

Labeling a CD — Disc Memo

(For a CD unit with the custom file function)

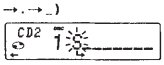
You can label each disc with a personalized name. You can enter up to eight characters for a disc. If you label a CD, you can locate the disc by name (page 20) and select the specific tracks for playback (page 20).

1 Play the CD and press (LIST) for two seconds.



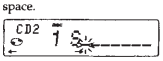
2 Enter the characters.

❶ Rotate the dial clockwise to select the desired characters.
(A → B → C → ··· Z → 0 → 1 → 2 → ··· 9 → + → − → * → / → \ → > → < → . → _)



If you rotate the dial counterclockwise, the characters will appear in reverse order.
If you want to put a blank space between characters, select "_" (under-bar).

❷ Press (5) (→) after locating the desired character.
The flashing cursor moves to the next space.



If you press (2) (←), the flashing cursor moves to the left.

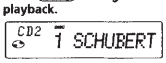
❸ Repeat steps ❶ and ❷ to enter the entire name.

3 To return to normal CD playback mode, press (LIST) for two seconds.

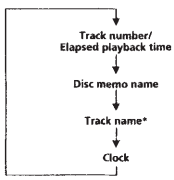
Tip
To erase or correct a name, enter "_" (under-bar) for each character.

Displaying the disc memo

Press (DSPL) during CD or CD TEXT disc playback.



Each time you press (DSPL) during CD or CD TEXT disc playback, the item changes as follows:



** If you connect an optional CD unit with the CD TEXT function, the CD TEXT information will appear in the display when you play a CD TEXT disc.*

Erasing the disc memo

1 Press (SOURCE) repeatedly to select CD.

2 Press (MODE) repeatedly to select the CD unit.

3 Press (LIST) for two seconds.

4 Press (DSPL) for two seconds.

5 Rotate the dial to select the name you want to erase.

6 Press (6) (ENTER) for two seconds.
The name is erased.
Repeat steps 5 and 6 if you want to erase other names.

7 Press (LIST) for two seconds.
The unit returns to normal CD playback mode.

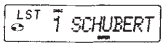
Note
When a personalized label is erased, the original CD TEXT information will appear in the display.

Locating a disc by name

— List-up (For a CD unit with the custom file function or an MD unit)

You can use this function for discs that have been assigned a custom name. For more information on disc names, refer to "Labeling a CD" (page 19).

1 Press (LIST).
The name assigned to the current disc appears in the display.



When you assign a disc memo label to a CD TEXT disc, it takes priority over the original CD TEXT information.

2 Press (LIST) repeatedly until you find the desired disc.

3 Press (6) (ENTER) to play the disc.

Notes
- *After a disc name has been displayed for five seconds, the display returns to normal playback mode. To turn off the display, press (DSPL).*
- *The track names are not displayed during MD or CD TEXT disc playback.*
- *If there are no discs in the magazine, "NO Disc" appears in the display.*
- *If a disc has not been assigned a custom file, "********" appears in the display.*
- *If the disc information has not been read by the unit, "?" appears in the display. To load a disc, first press the number button, then choose the disc that has not been loaded.*
- *There are also some letters which cannot be displayed (during MD or CD TEXT disc playback).*

Selecting specific tracks for playback

— Bank (For a CD unit with the custom file function)

If you label the disc, you can set the unit to skip or play the tracks of your choice.

1 Start playing the disc and press (SHIFT), then press (4) (PLAY MODE) for two seconds.

Bank edit mode.

Note
If you have not labeled the disc, the bank edit mode does not appear. To go back to normal playback mode, press (SHIFT).

2 Push the SEEK/AMS control up or down to select the track number you want to skip and press (6) (ENTER).

The indication changes from "Play" to "Skip." To return the indication to "Play," press (6) (ENTER) again.

3 Repeat step 2 to set "Play" or "Skip" for all the tracks.

4 Press (4) (PLAY MODE) for two seconds.
The unit returns to normal CD playback mode.

5 Press (SHIFT).

Notes
- *You can set "Play" or "Skip" for up to 24 tracks.*
- *You cannot set "Skip" for all the tracks on a CD.*

Playing specific tracks only

You can select:
- Bank on - to play the tracks with the "Play" setting.
- Bank inv (Inverse) - to play the tracks with the "Skip" setting.

1 During playback, press (SHIFT), then press (4) (PLAY MODE) repeatedly until "Bank" appears.

2 Press (5) (→) to repeatedly until the desired setting appears.

Bank on → Bank inv → Bank off

Playback starts from the track following the current one.

3 Press (SHIFT).

To return to normal playing mode, select "Bank off" in step 2 above.

TV/Video

You can connect an optional TV tuner and TV monitor to this unit.

Watching the TV

1 Press (SOURCE) repeatedly until "TV" appears.

2 Push the SEEK/AMS control up or down to select the desired TV band.

Watching a video

1 Press (SOURCE) repeatedly until "TV" appears.

2 Press (MODE) repeatedly to select "Video 1."
Playback the video.

Note
"Video 2" appears if the VIDEO 2 terminal of the TV monitor is selected.

Memorizing TV channels automatically

The unit selects the TV channels with the strongest signals and memorizes them in the order of their frequency.

Caution
When tuning in a station while driving, use Best Tuning Memory to prevent accidents.

1 Press (SOURCE) repeatedly until "TV" appears.

2 Press (SHIFT), then press (4) (PLAY MODE) repeatedly until "Auto mem?" appears.

continue to next page →

3 Press (5) (→).
The unit stores TV channels in the order of their frequencies on the number buttons. A beep sound when the setting is stored.

4 Press (SHIFT).

Notes
- *The unit does not store TV channels with weak signals. If only a few TV channels can be received, some number buttons will remain empty.*
- *When a preset number is indicated in the display, the unit starts storing TV channels from the one currently displayed.*

Memorizing only the desired TV channels

You can store up to 10 channels on the number buttons in the order of your choice.

1 Press (SOURCE) repeatedly until "TV" appears.

2 Push the SEEK/AMS control up or down to tune in the TV channel you want to store on each number button.

3 Keep the desired number button (1 to 10) pressed until you hear a beep sound.
The number button indication appears in the display.

Note
If you try to store another channel on the same number button, the previously stored channel will be erased.

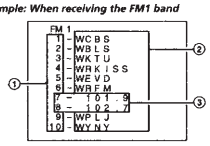
Storing the TV channel names

Follow the steps in "Storing the station names" (page 11).

Displaying the TV or radio station names

Press (LIST) during TV or radio reception.

Example: When receiving the FM1 band



① Preset number
② Stored station names
③ Frequencies*

* *If the name of a station is not stored, the frequency of that station will be displayed instead.*

Notes
- *It may take some time before all indications appear in the display.*
- *The TV channel does not appear during list display.*
- *The contents of the preset memory cannot be listed when the unit is in simultaneous play mode (page 23).*

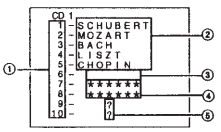
Turning off the display

During radio reception, press (LIST) again.
During TV reception, the list display on the TV monitor will automatically turn off after a few seconds.

Displaying the information stored on discs

Press (LIST) during CD/MD playback.

Example: When CD unit 1 is selected.



① Disc numbers
② Titles stored as custom files
③ No disc is loaded*1
④ No stored titles*2
⑤ TOC information has not been identified yet*3

*1 *A blank space is displayed next to a disc number represents empty slots in the disc magazine.*
*2 *If a title is not registered in the custom file, "******" is displayed.*
*3 *If the disc information has not been read yet, "?" is displayed.*

Notes
- *It may take some time until all indications appear in the display.*
- *The TV channel does not appear during list display.*
- *The contents of the preset memory cannot be listed when the unit is in the simultaneous play mode.*

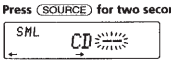
Turning off the display

Press (LIST) again.

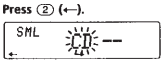
Watching the TV or video while listening to a CD or MD — Simultaneous Play

The simultaneous play function does not work while you are listening to the radio.

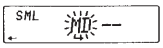
1 Press (SOURCE) for two seconds.



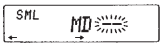
2 Press (2) (←).



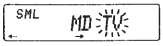
3 Press (SOURCE) repeatedly to select a CD or MD.



4 Press (5) (→).



5 Press (SOURCE) repeatedly to select a TV or video.



6 Press (SOURCE) for two seconds.
Simultaneous Play starts.

If you are already watching the TV or video and want to begin listening to a CD or MD as well follow the same above steps except press (5) (→) in step 2 and press (2) (←) in step 4.

Returning to normal mode

To cancel the CD or MD, follow the steps above and select "– –" in step 3.

To cancel the TV or video, follow the steps above and select "– –" in step 5.

Notes
If you press the EJECT button on a CD/MD unit while the unit is in simultaneous play mode, Simultaneous Play is canceled.

Connections

Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Be careful not to pinch any wires between a screw and the body of the car or this unit or between any moving parts such as the seat railing, etc.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in combination with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.
- Connecting this unit may cause some car battery wear when your car has no ACC (accessory) position on the ignition key switch.
  In this case, please consult your nearest Sony dealer.
- The use of optical instruments with this product will increase eye hazard.

Connexions

Précautions

- Cet appareil est conçu pour fonctionner sur tension continue de 12 V avec masse négative.
- Veiller à ne pas coincer de fils entre une vis et la carrosserie de la voiture ou cet appareil ou encore entre des pièces mobiles comme les glissières des sièges, etc.
- Avant d'effectuer les connexions, débrancher la borne de terre de la batterie du véhicule pour éviter tout court-circuit.
- Brancher les fils d'entrée d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres branchements.
- Veiller à ne pas raccorder le fil rouge d'entrée d'alimentation à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoires.
- **Rassembler tous les fils de terre en un point de masse commun.**
- Brancher le câble jaune à un circuit libre de la voiture dont la capacité nominale est supérieure à la capacité du fusible de l'appareil. Si vous branchez cet appareil en série avec d'autres composants stéréo, le circuit de la voiture auquels ils sont raccordés doit afficher une capacité nominale supérieure à la somme des capacités individuelles de chaque composant. S'il n'y a pas de circuits de voiture affichant une capacité égale à la capacité du fusible de l'appareil, brancher l'appareil directement à la batterie. Si aucun circuit de voiture n'est disponible pour connecter cet appareil, brancher l'appareil à un circuit de voiture supérieur à la capacité du fusible de l'appareil de telle sorte que si l'appareil grille son fusible, aucun autre circuit ne soit coupé.
- Le raccordement de cet appareil peut entraîner une certaine usure de la batterie si le contact de votre voiture n'est pas doté d'une position accessoires (ACC).
  Le cas échéant, consultez un revendeur Sony.

Connection diagram

Schémas de connexion

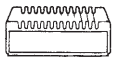
Equipment used in illustrations (not supplied)

For connecting two or more changers, the source selector XA-C30 (optional) is necessary.

Appareils utilisés dans les illustrations (non fournis)

Dans le cas du raccordement de deux changeurs ou plus, le sélecteur de source XA-C30 (optionnel) est indispensable.

Front speakers
Haut-parleurs avant

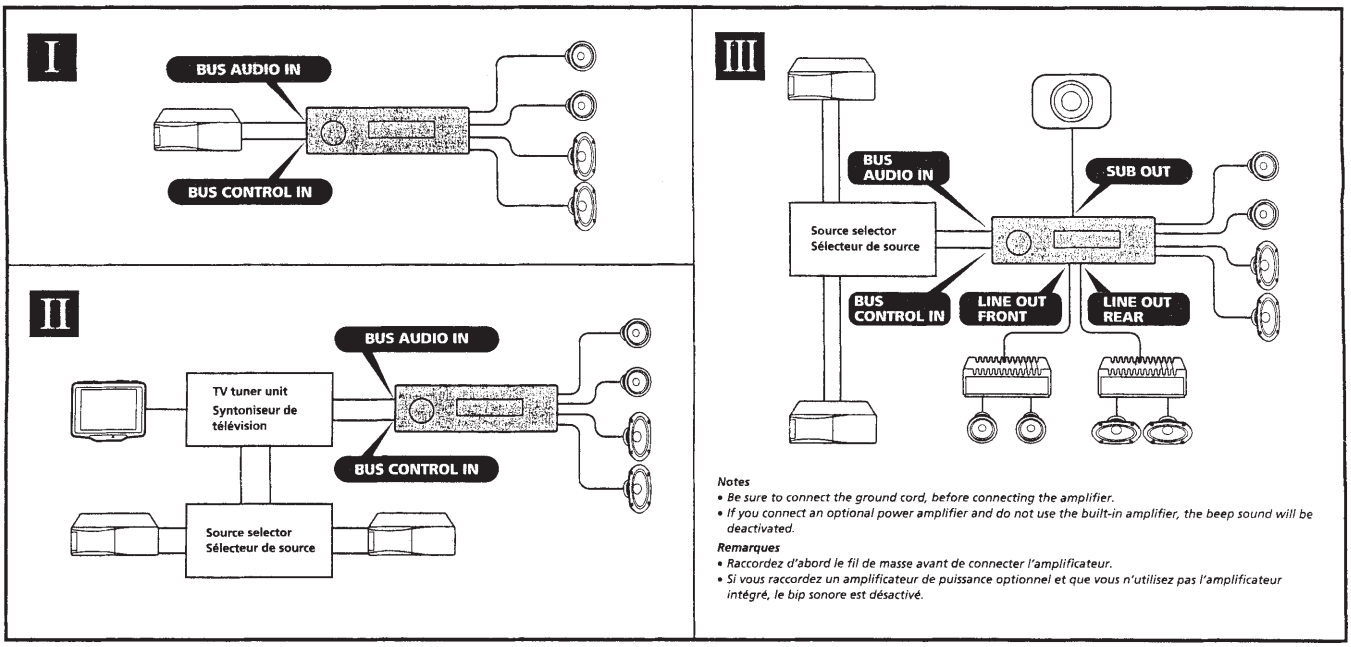

Power amplifier
Amplificateur de puissance

TV monitor
Moniteur de la télévision

Rear speakers
Haut-parleurs arrière

CD/MD changer
Changeur de CD/MD

Subwoofer
HP extrêmes-graves



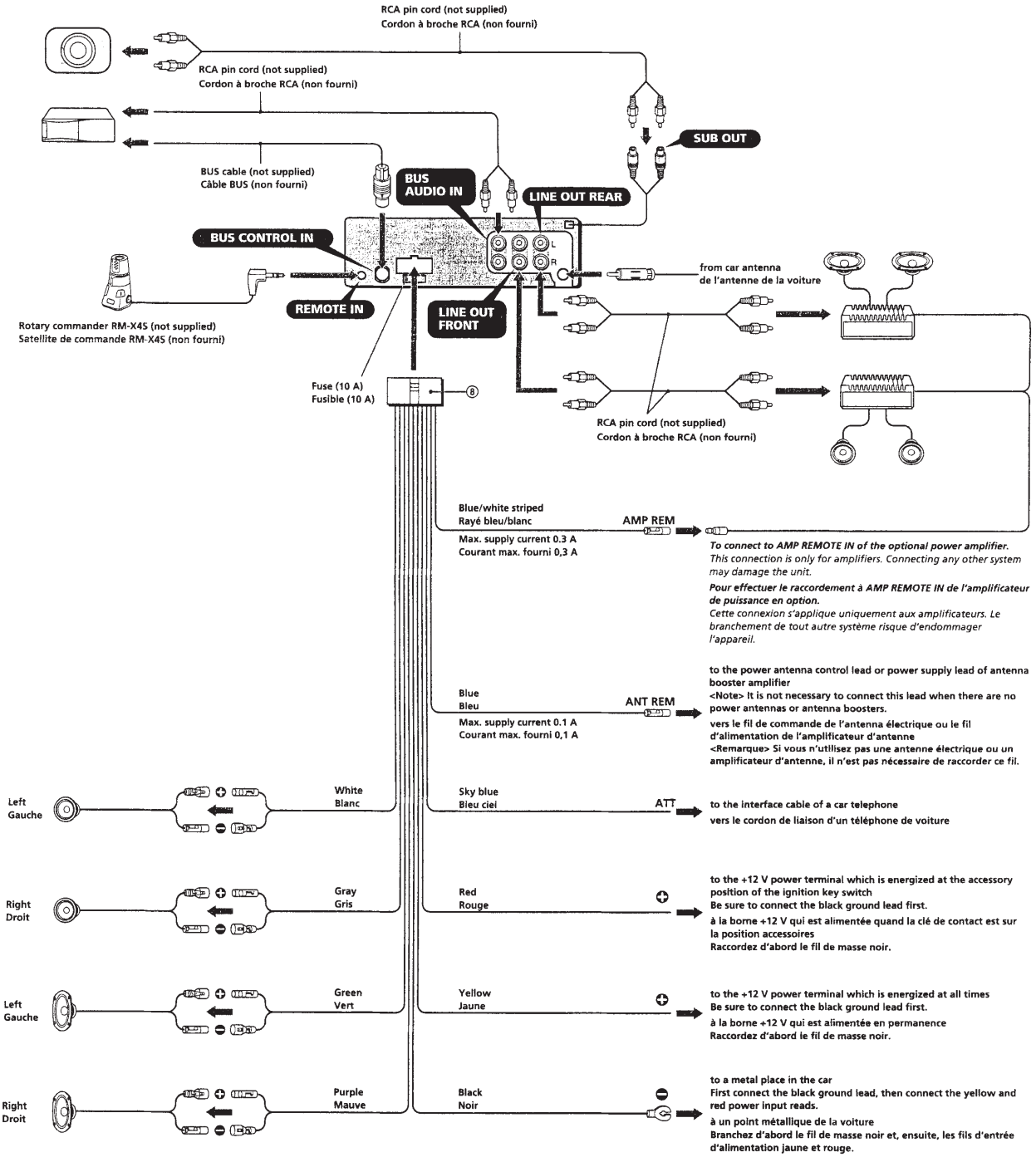
Notes

- *Be sure to connect the ground cord, before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

Remarques

- *Raccordez d'abord le fil de masse avant de connecter l'amplificateur.*
- *Si vous raccordez un amplificateur de puissance optionnel et que vous n'utilisez pas l'amplificateur intégré, le bip sonore est désactivé.*

Connection example
Exemple de connexions


RCA pin cord (not supplied)
Cordon à broche RCA (non fourni)
RCA pin cord (not supplied)
Cordon à broche RCA (non fourni)
SUB OUT
BUS cable (not supplied)
Câble BUS (non fourni)
BUS AUDIO IN
LINE OUT REAR
BUS CONTROL IN
from car antenna
de l'antenne de la voiture
REMOTE IN
LINE OUT FRONT
Rotary commander RM-X4S (not supplied)
Satellite de commande RM-X4S (non fourni)
Fuse (10 A)
Fusible (10 A)
RCA pin cord (not supplied)
Cordon à broche RCA (non fourni)
Blue/white striped
Rayé bleu/blanc
AMP REM
Max. supply current 0.3 A
Courant max. fourni 0,3 A
To connect to AMP REMOTE IN of the optional power amplifier.
This connection is only for amplifiers. Connecting any other system may damage the unit.
Pour effectuer le raccordement à AMP REMOTE IN de l'amplificateur de puissance en option.
Cette connexion s'applique uniquement aux amplificateurs. Le branchement de tout autre système risque d'endommager l'appareil.
Blue
Bleu
ANT REM
Max. supply current 0.1 A
Courant max. fourni 0,1 A
to the power antenna control lead or power supply lead of antenna booster amplifier
<Note> It is not necessary to connect this lead when there are no power antennas or antenna boosters.
vers le fil de commande de l'antenna électrique ou le fil d'alimentation de l'amplificateur d'antenne
<Remarque> Si vous n'utilisez pas une antenne électrique ou un amplificateur d'antenne, il n'est pas nécessaire de raccorder ce fil.
Left
Gauche
White
Blanc
Sky blue
Bleu ciel
ATT
to the interface cable of a car telephone
vers le cordon de liaison d'un téléphone de voiture
Right
Droit
Gray
Gris
Red
Rouge
to the +12 V power terminal which is energized at the accessory position of the ignition key switch
Be sure to connect the black ground lead first.
à la borne +12 V qui est alimentée quand la clé de contact est sur la position accessoires
Raccordez d'abord le fil de masse noir.
Left
Gauche
Green
Vert
Yellow
Jaune
to the +12 V power terminal which is energized at all times
Be sure to connect the black ground lead first.
à la borne +12 V qui est alimentée en permanence
Raccordez d'abord le fil de masse noir.
Right
Droit
Purple
Mauve
Black
Noir
to a metal place in the car
First connect the black ground lead, then connect the yellow and red power input reads.
à un point métallique de la voiture
Branchez d'abord le fil de masse noir et, ensuite, les fils d'entrée d'alimentation jaune et rouge.

Notes on the control leads
- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Remarques sur les fils de contrôle
- *Le fil de contrôle de l'antenne électrique (bleu) fournit une tension continue de +12 V quand vous mettez l'appareil sous tension.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

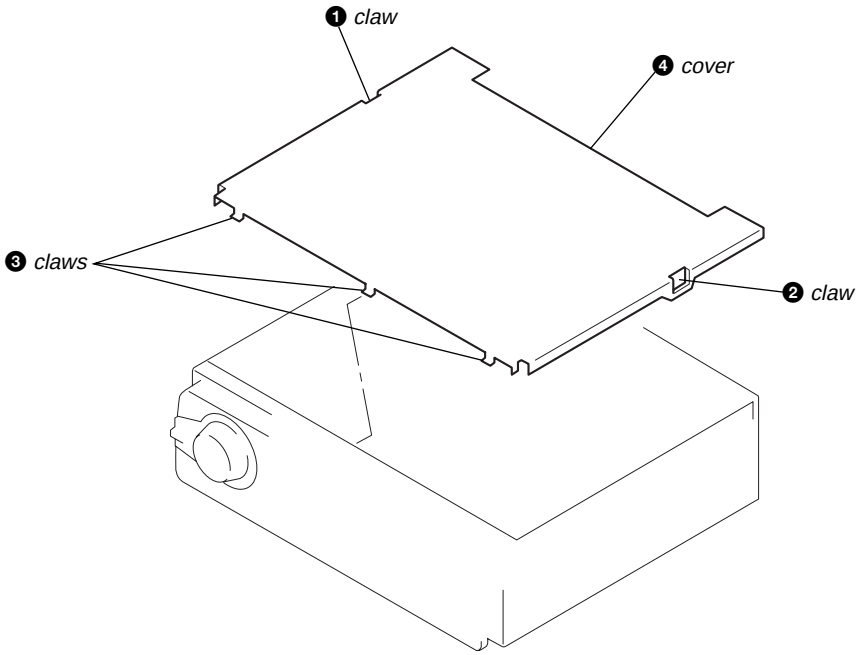
Connexion pour la conservation de la mémoire
Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur la connexion des haut-parleurs
- *Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.*
- *Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.*
- *Ne pas raccorder les bornes du système de haut-parleurs au châssis de la voiture et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne pas tenter de raccorder les haut-parleurs en parallèle.*
- *Ne pas raccorder des haut-parleurs actifs (avec amplificateurs intégrés) aux bornes de haut-parleur de l'appareil sous peine de les endommager. Veiller à raccorder des haut-parleurs passifs à ces bornes.*

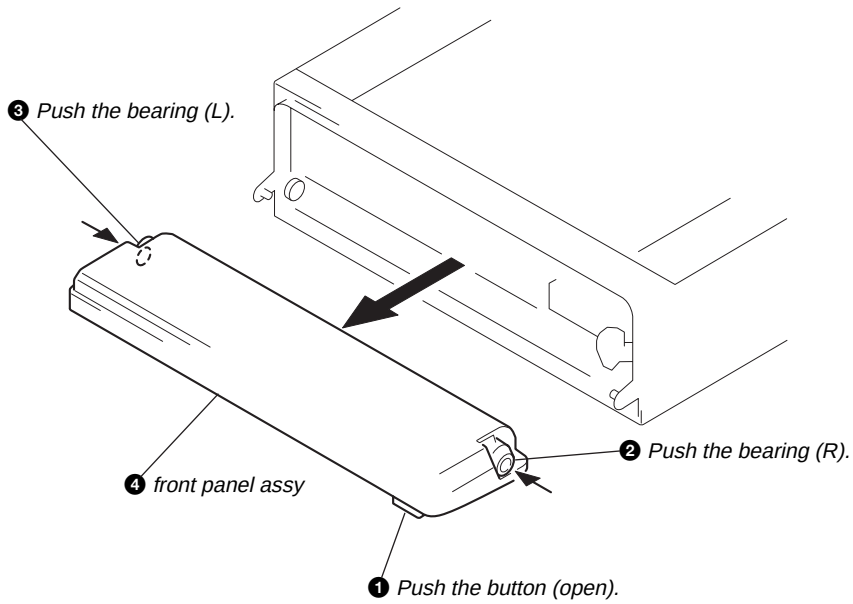
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

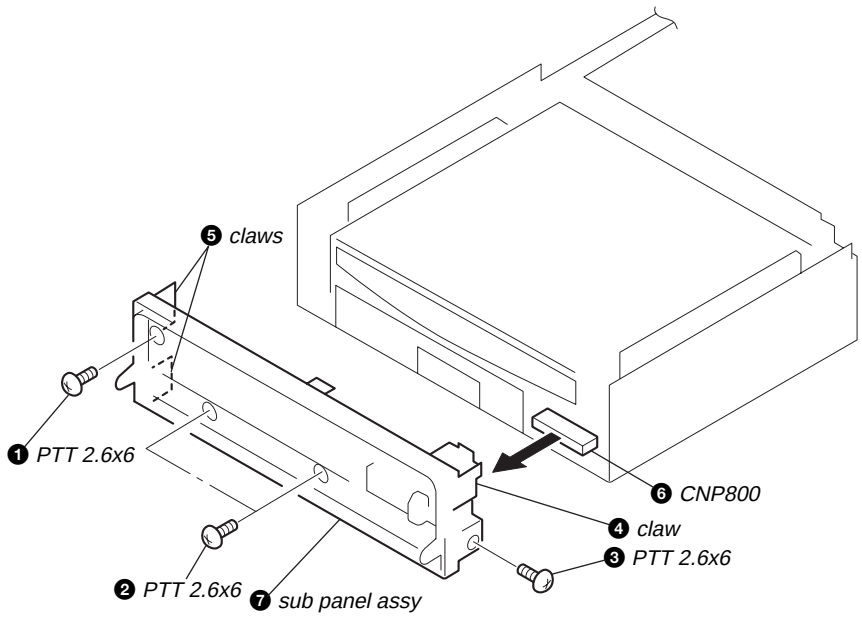
2-1. COVER



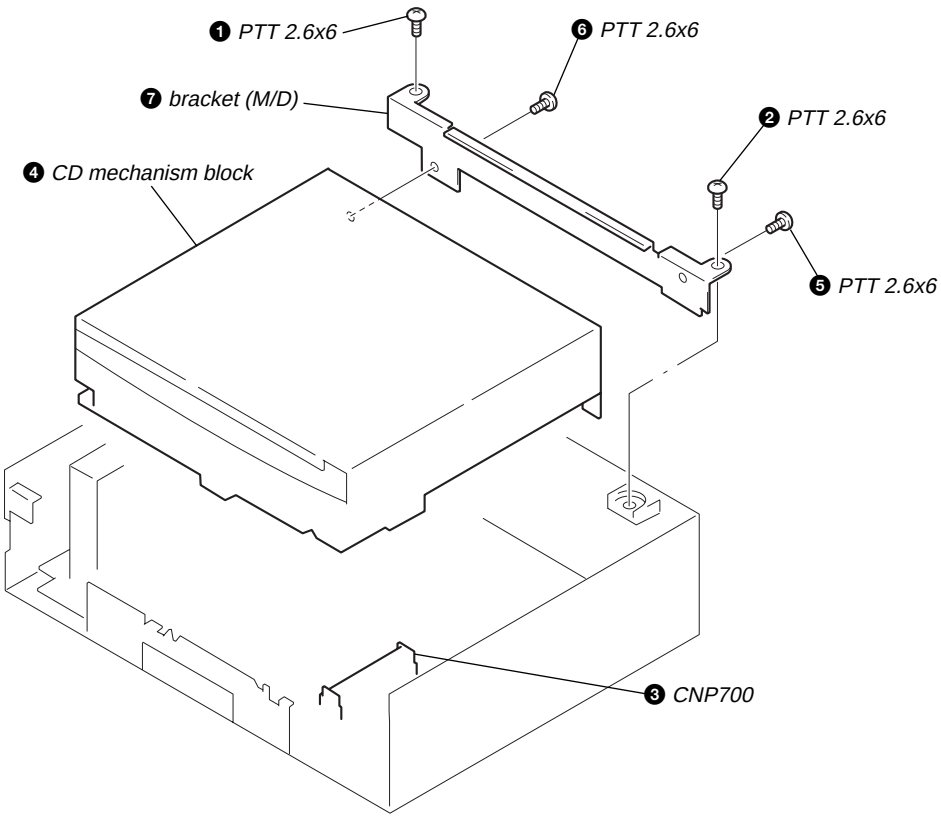
2-2. FRONT PANEL ASSY



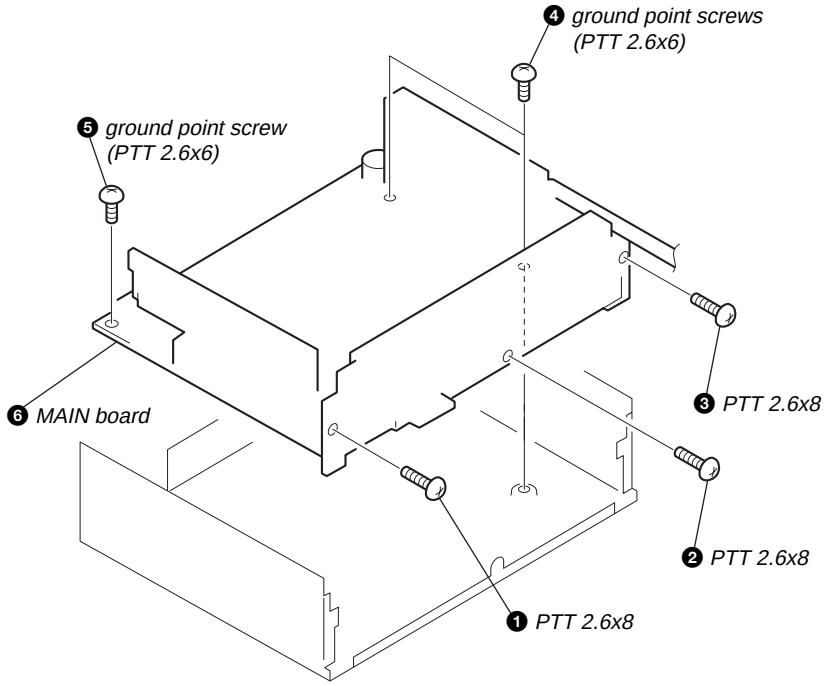
2-3. SUB PANEL ASSY



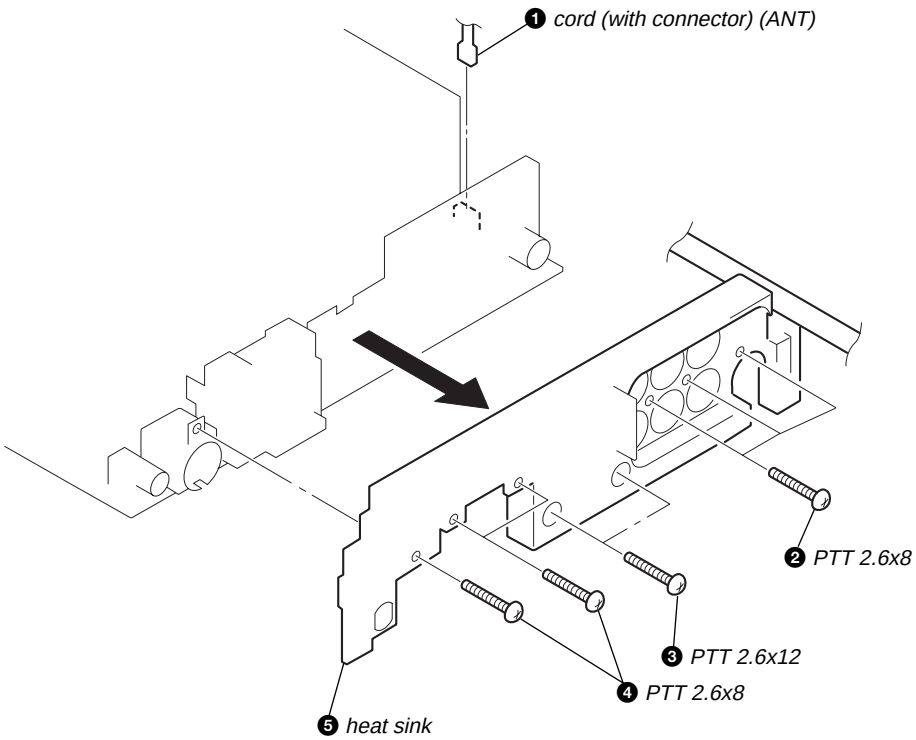
2-4. CD MECHANISM BLOCK



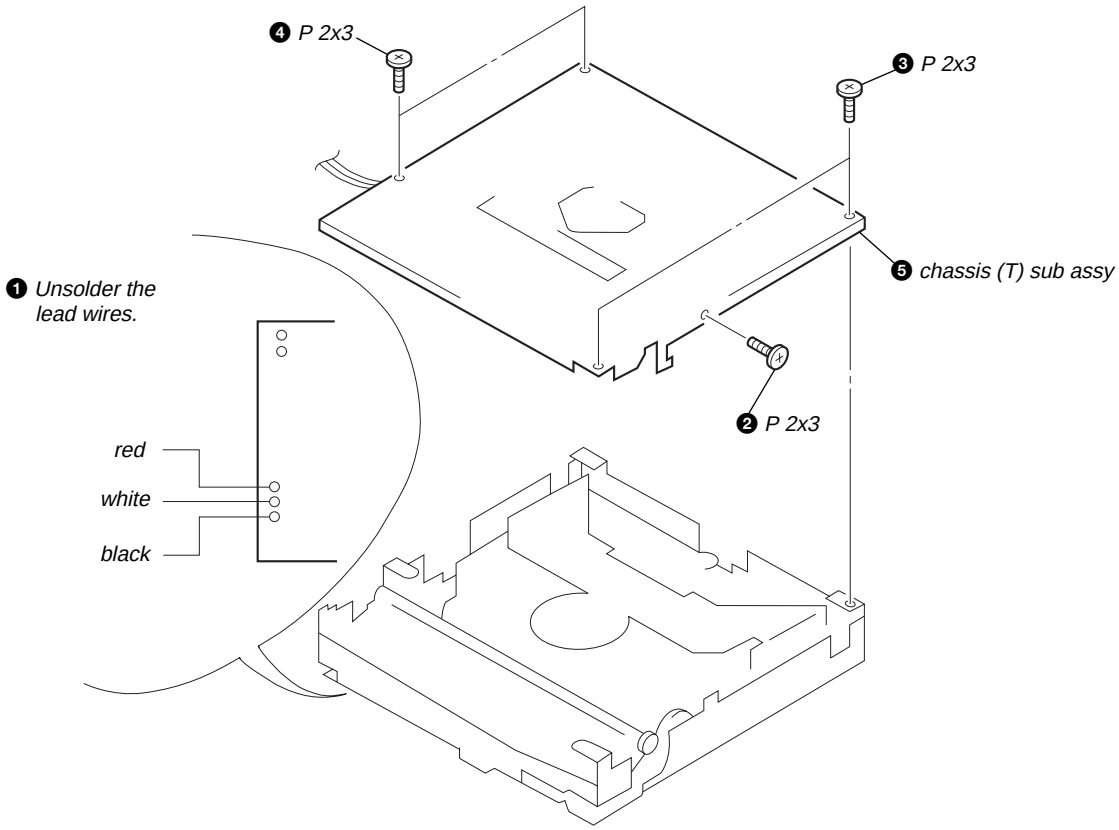
2-5. MAIN BOARD



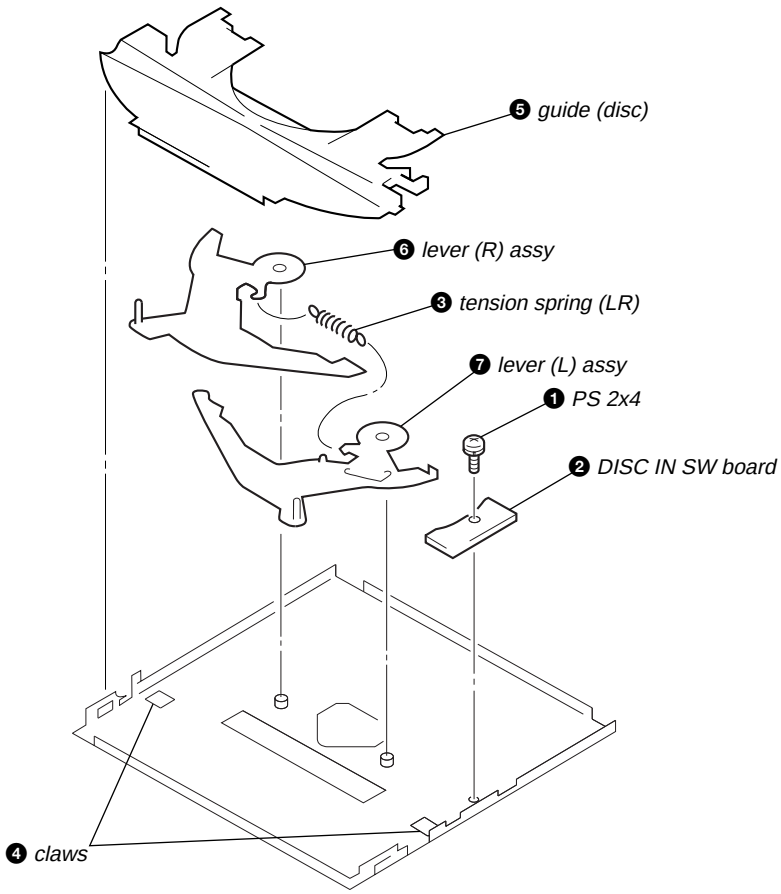
2-6. HEAT SINK



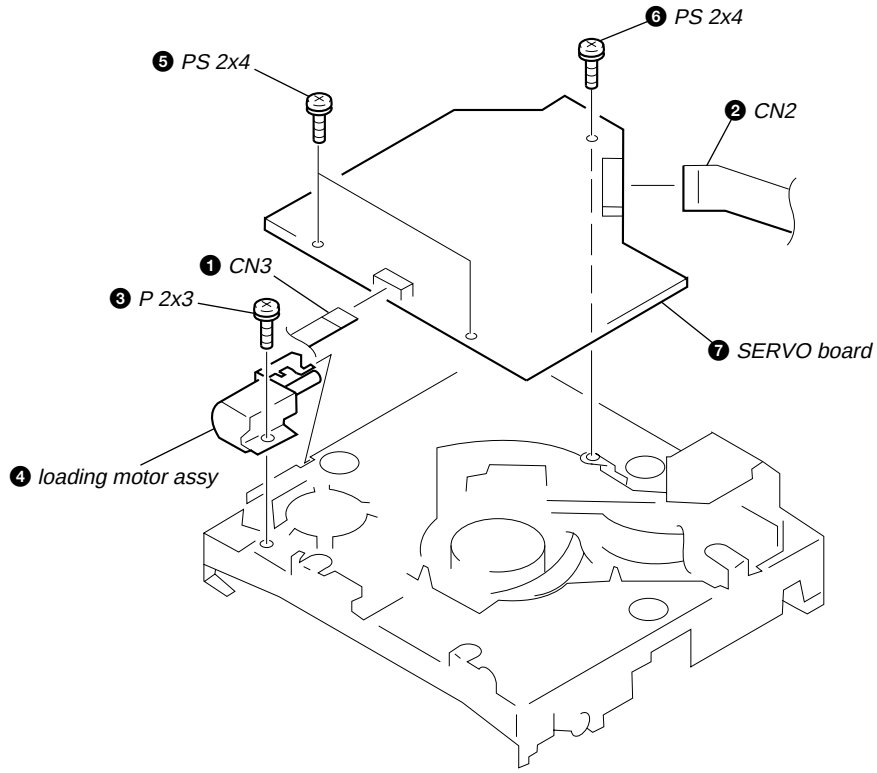
2-7. CHASSIS (T) SUB ASSY



2-8. LEVER ASSY



2-9. SERVO BOARD



2-10. ROLLER ASSY

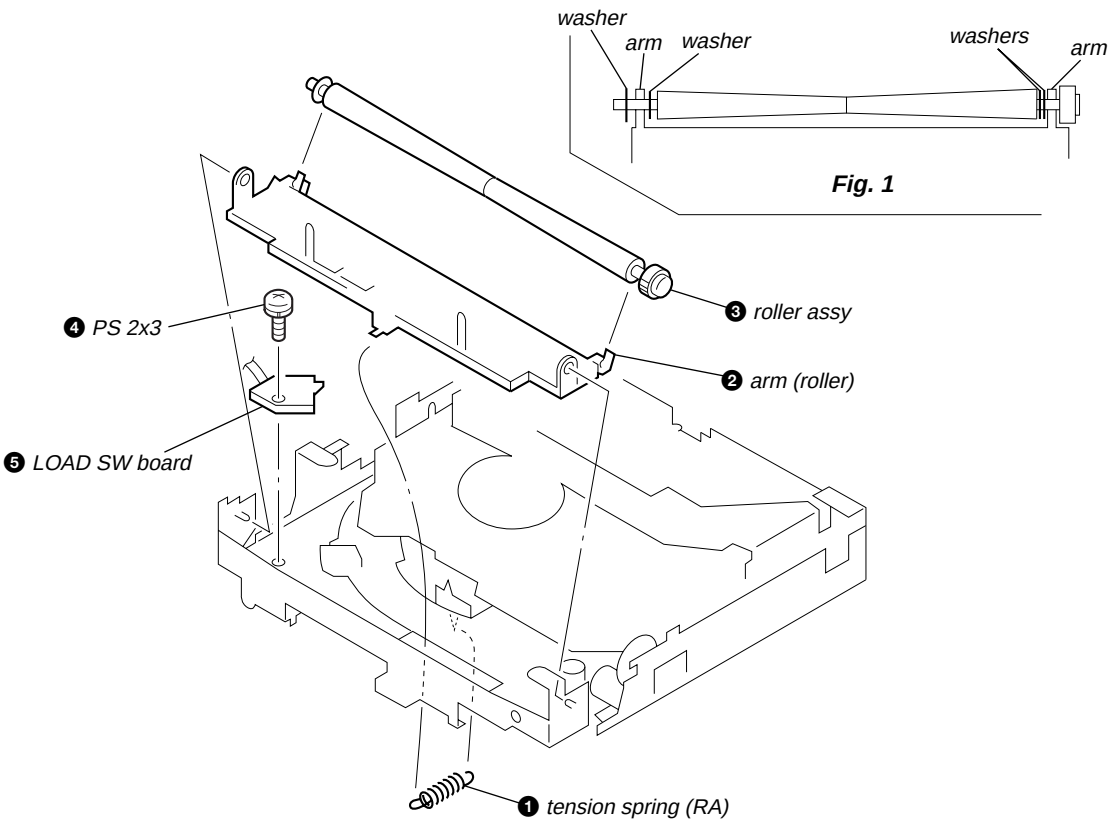
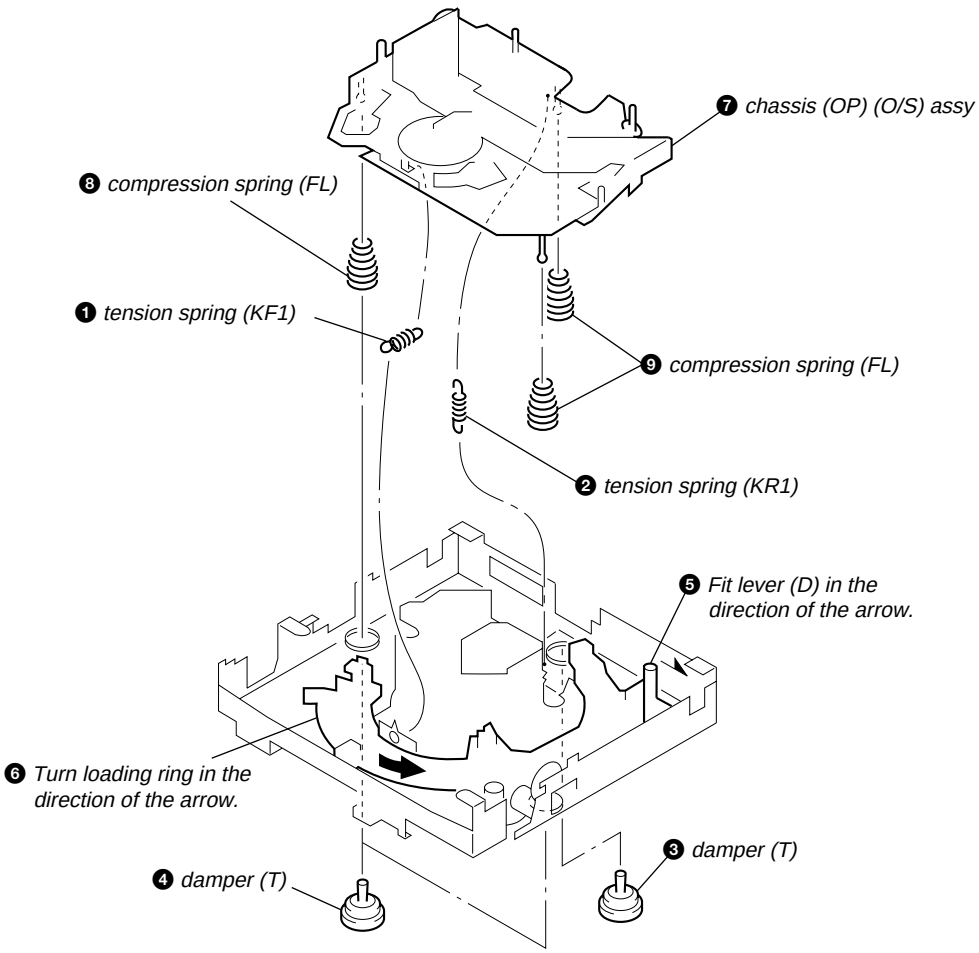
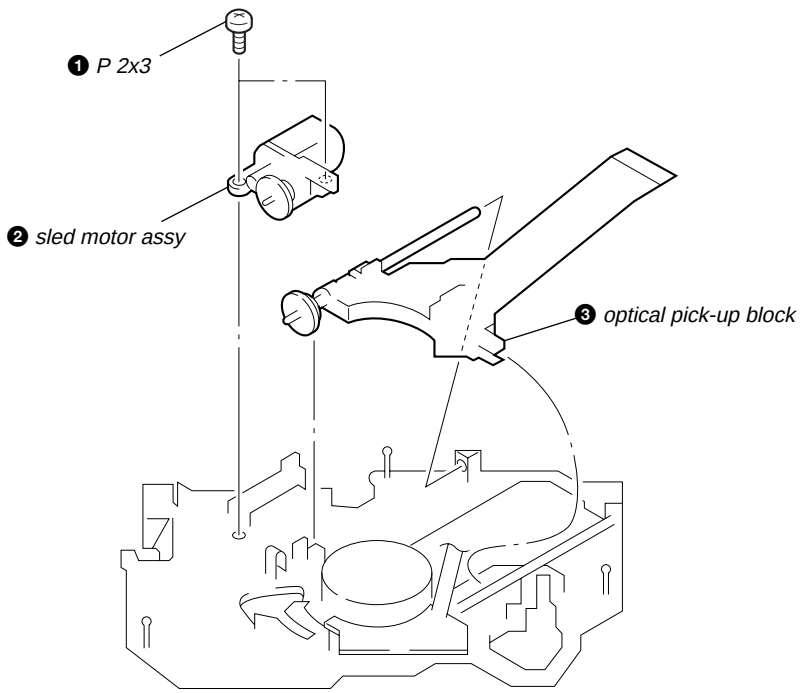


Fig. 1

2-11. CHASSIS (OP) (O/S) ASSY


❼ chassis (OP) (O/S) assy
❽ compression spring (FL)
❶ tension spring (KF1)
❾ compression spring (FL)
❷ tension spring (KR1)
❺ Fit lever (D) in the direction of the arrow.
❻ Turn loading ring in the direction of the arrow.
❸ damper (T)
❹ damper (T)

2-12. OPTICAL PICK-UP BLOCK



SECTION 3
ELECTRICAL ADJUSTMENTS

TUNER SECTION **0 dB = 1 μV**

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and AM Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>
1. Set the "OFF" mode.
2. Push the preset [4] button.
3. Push the preset [5] button.
4. Press the preset [1] button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

<Release the Test Mode>
1. Push the [OFF] button.

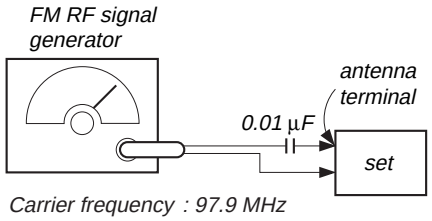
Note on Adjustment

The adjustments of tuner section, should be performed according to the following sequence.
1. FM Auto Scan/Stop Level Adjustment
2. FM Stereo Separation Adjustment (WIDE)
3. FM Stereo Separation Adjustment (NARROW)
4. AM Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

Setting :

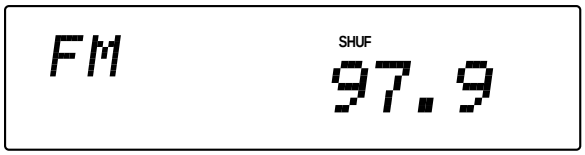
SOURCE button : FM



Carrier frequency : 97.9 MHz
Output level : 22 dB (12.6 μV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

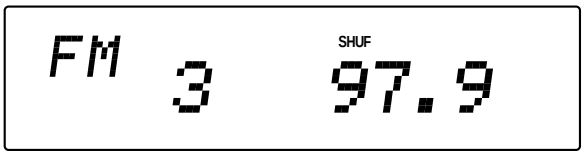
Procedure :
1. Set to the test mode.
2. Push the [SOURCE] button and set to FM.

Display



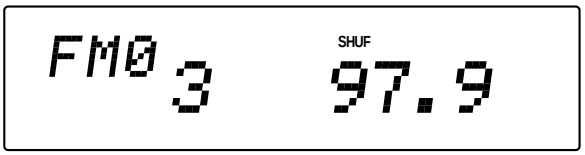
3. Push the preset [3] button.

Display



4. Adjust with the volume RV2 on TU601 so that the "FM" indication turns to "FM0" indication on the display window. But, in case of already indicated "FM0", turn the RV2 so that put out light "0" indication and adjustment.

Display

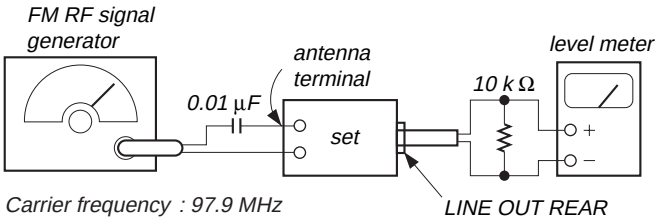


Adjustment Location : See page 18.

FM Stereo Separation Adjustment (WIDE)

Setting :

SOURCE button : FM1



Carrier frequency : 97.9 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main : 1 kHz, 33.75 kHz deviation (45%)
sub : 1 kHz, 33.75 kHz deviation (45%)
19 kHz pilot : 7.5 kHz deviation (10%)

Procedure :

FM stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV3 on TU601 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV3 on TU601 for minimum reading.

L-CH stereo separation : Ⓐ – Ⓑ
R-CH stereo separation : Ⓒ – Ⓓ
The separations of both channels should be equal.

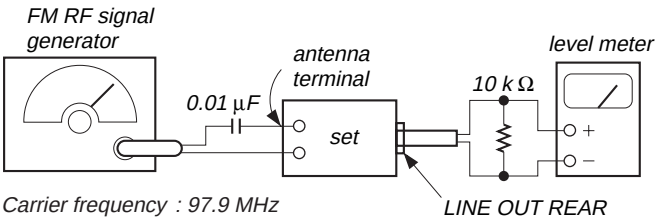
Specification : Separation more than 24 dB

Adjustment Location : See page 18.

FM Stereo Separation Adjustment (NARROW)

Setting :

SOURCE button : FM1



Carrier frequency : 97.9 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main : 1 kHz, 33.75 kHz deviation (45%)
sub : 1 kHz, 33.75 kHz deviation (45%)
19 kHz pilot : 7.5 kHz deviation (10%)

Procedure :

1. Push the [SHIFT] button.
2. Push the [4] button three times.
3. Push the [5] button twice and set to NARROW mode.

FM stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TU601 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TU601 for minimum reading.

L-CH stereo separation : Ⓐ – Ⓑ
R-CH stereo separation : Ⓒ – Ⓓ
The separations of both channels should be equal.

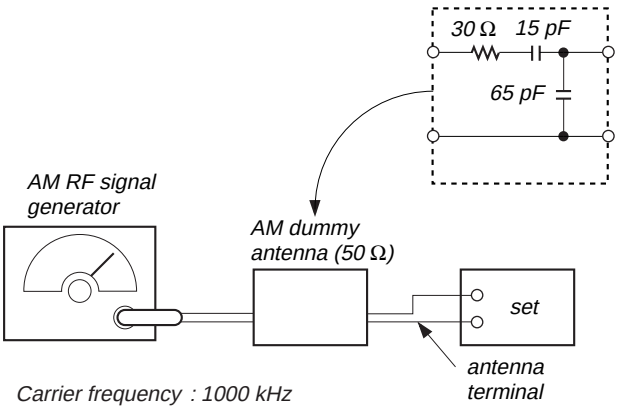
Specification : Separation more than 18 dB

Adjustment Location : See page 18.

AM Auto Scan/Stop Level Adjustment

Setting :

SOURCE ⟶ MODE button : AM

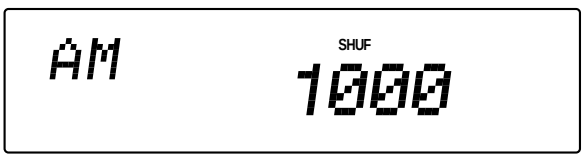


Carrier frequency : 1000 kHz
30% amplitude modulation by 1 kHz signal
output level : 33 dB (44.7 μV)

Procedure :

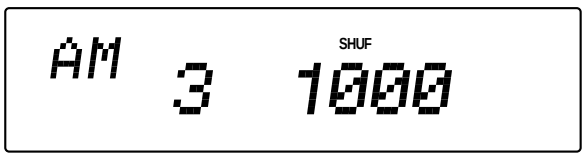
1. Set to the test mode. (See page 16.)
2. Push the SOURCE button.
3. Push the MODE button and set to AM.

Display



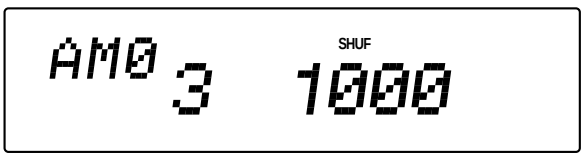
4. Push the preset 3 button.

Display



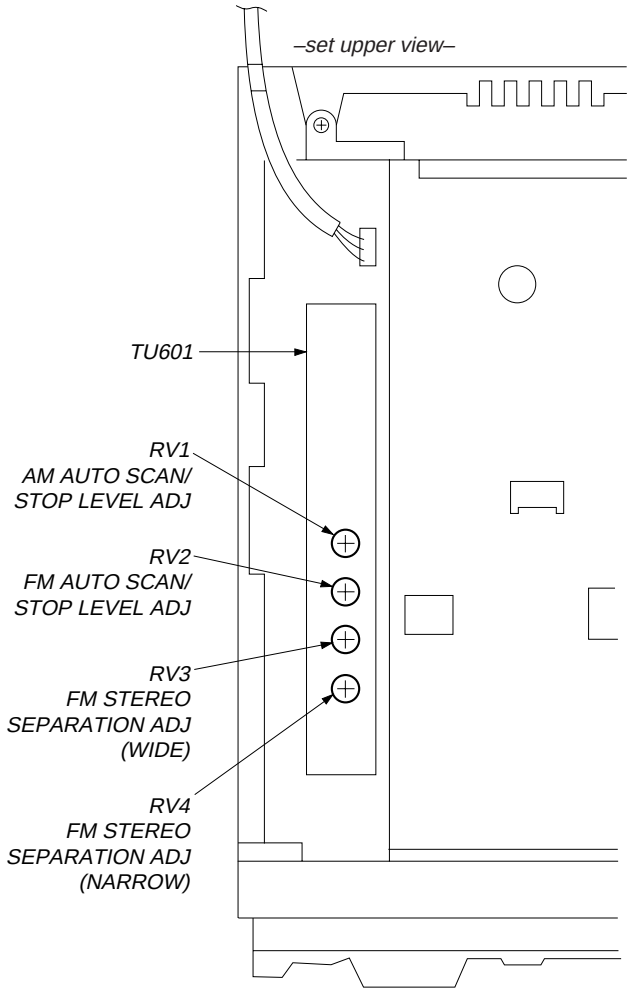
5. Adjust with the volume RV1 on TU601 so that the “AM” indication turns to “AM0” indication on the display window. But, in case of already indicated “AM0”, turn the RV1 so that put out light “0” indication and adjustment.

Display



Adjustment Location : tuner unit (TU601)

Adjustment Location : tuner unit (TU601)

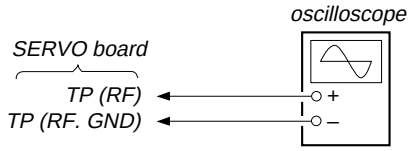


CD SECTION

Note:
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.
4. Clean an objective lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

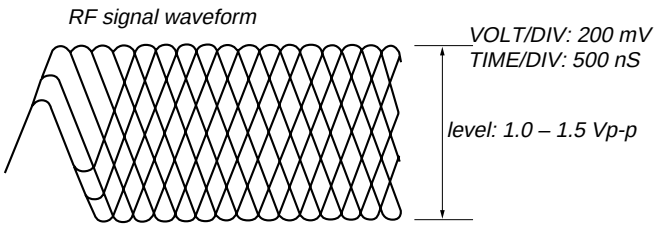
Focus Bias Adjustment

Setting: This adjustment is performed with the set placed horizontally.



Procedure:
1. Connect an oscilloscope between TP (RF) and TP (RF. GND) on the SERVO board.
2. Connect the power supply.
3. Push the RESET button (S900) on the MAIN board.
4. Insert the disc (YEDS-18) and playback.
5. Adjust RV1 so that the oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the sharp "≈ " can be clearly distinguished at the center of the waveform.



- When observing the eye pattern, set the oscilloscope to AC range and raise the vertical sensitivity so that it may be easily seen.

Adjustment Location: servo board

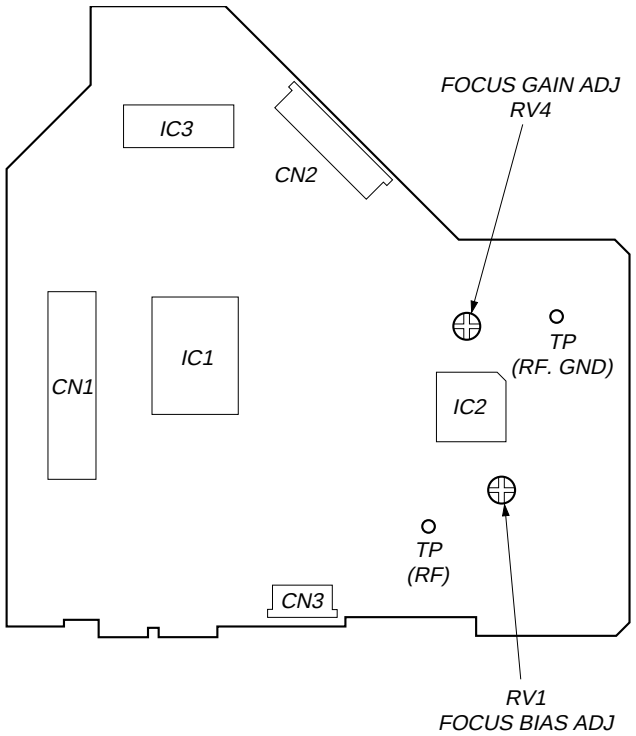
Focus Gain Adjustment (Coarse adjustment)

This adjustment is not required unless the following parts are replaced:
- Optical pick-up
- RV4

Procedure:
1. Set RV4 to the standard position. (mechanical center)
2. Check whether operation noise (while noise type) caused by the 2-axis device (lens section of the optical pick-up) is abnormally loud.
   If the operation noise is too loud, turn RV4 slightly counter-clockwise.
- If the gain is too low:
  Focus does not function and no music is selected.
- If the gain is too high:
  Noise caused by scratches and dust is heard and the operation becomes unstable.

Adjustment Location: servo board

Adjustment Location: servo board (component side)



SECTION 4
DIAGRAMS

4-1. IC PIN DESCRIPTION

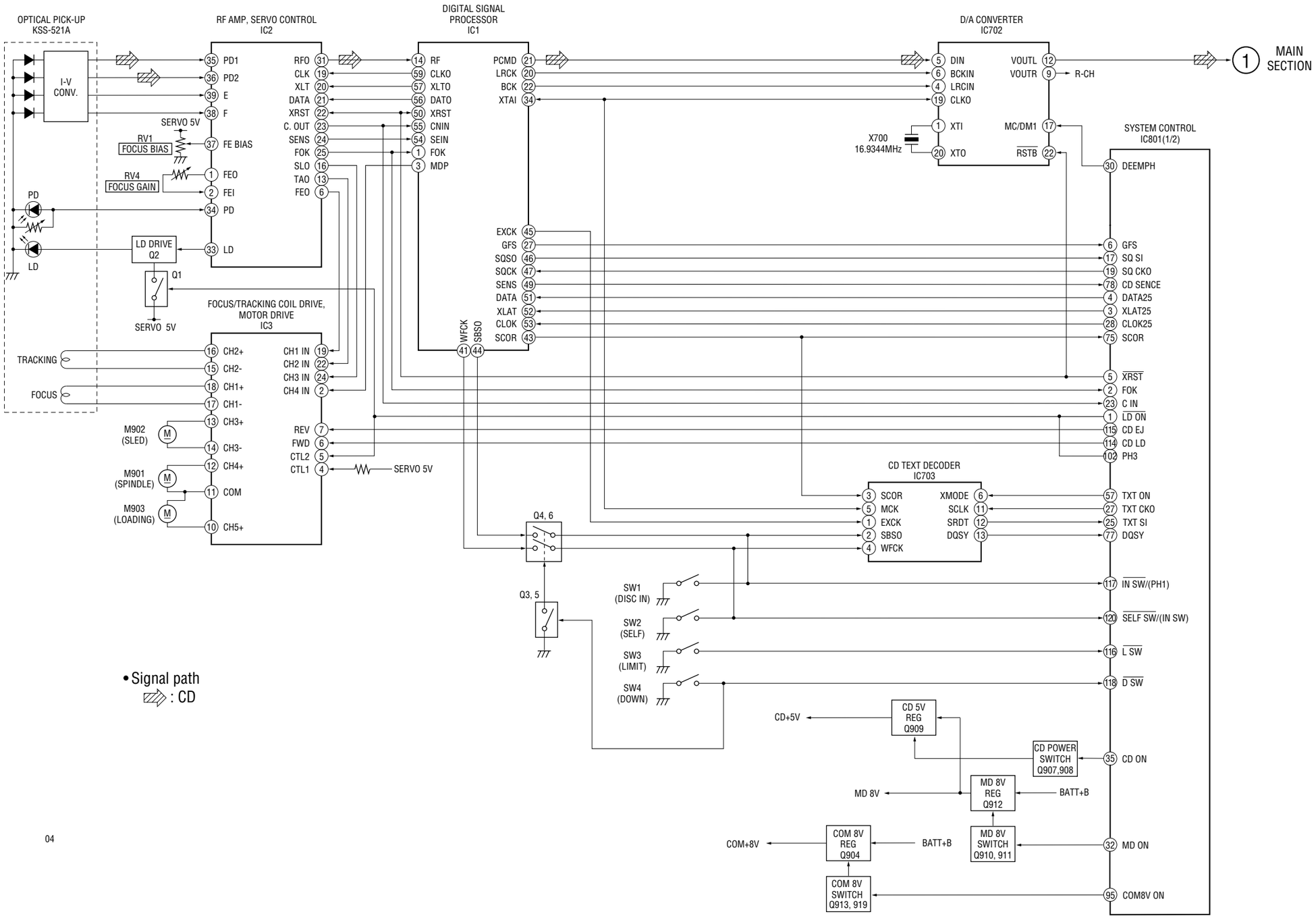
• IC801 MB90574PFV-G-179-BND (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1	$\overline{\text{LD ON}}$	O	Laser ON/OFF control output
2	FOK	I	Focus OK signal detection input
3	XLAT25	O	CD signal processing latch output
4	DATA25	O	CD signal serial data output
5	$\overline{\text{XRST}}$	O	Reset output to CD signal processor IC.
6	GFS	I	GFS signal detection input
7	NIL	—	Not used. (Connect to ground in this set.)
8	VCC	—	Power supply pin (+5 V)
9 – 11	NIL	—	Not used. (Open)
12	FLS SI/$\overline{\text{NOSE1}}$	I	Front panel attachment detection input
13	LCD SO/FLS SO	O	LCD serial data output
14	LCD CKO	O	LCD serial clock output
15	BEEP	O	BEEP output
16	NIL	—	Not used. (Open)
17	SQ SI	I	Sub Q data input
18	NIL	—	Not used. (Connect to ground in this set.)
19	SQ CKO	O	Sub Q read clock output
20	UNI SI	I	BUS system serial interface input
21	UNI SO	O	BUS system serial interface output
22	UNI CK	I/O	BUS system serial clock input/output
23	C IN	I	Track jump No. count input
24	SIRCS	I	Remote commander input
25	TXT SI	I	CD-TEXT data input
26	NIL	—	Not used. (Connect to ground in this set.)
27	TXT CKO	O	CD-TEXT data read clock output
28	CLOK25	O	CD signal processing serial clock output
29	$\overline{\text{SYSRST}}$	O	System reset output
30	DEEMPH	O	De-emphasis output
31	$\overline{\text{AMP ATT}}$	O	Power amplifier attenuator control output
32	MD ON	O	CD mechanism power control output
33	VSS	—	Ground
34	C	—	Power stabilization capacitor pin
35	CD ON	O	CD power control output
36	$\overline{\text{BUS ON}}$	O	BUS ON control output
37	$\overline{\text{AD ON}}$	O	Power control output of A/D conversion.
38	DVCC	—	VREF input of D/A converter.
39	DVSS	—	Ground of D/A converter.
40	NIL	—	Not used. (Open)
41	ANGLE	O	LCD view angle alignment output (Not used in this set.)
42	AVCC	—	Analog power supply pin (+5 V)
43	AVRH	—	VREF + input of A/D converter.
44	AVRL	—	VREF – input of A/D converter.
45	AVSS	—	Analog ground
46 – 48	KEY IN0 – 2	I	Key input 0 – 2
49	RC IN0	I	Rotary commander input 0
50	QUALITY	I	Not used in this set.
51	NIL	—	Not used. (Connect to ground in this set.)
52	MPDH	I	Tuner multi path input (Not used in this set.)
53	S-METER	I	S-meter voltage detection input
54	VCC	—	Power supply pin (+5 V)
55	NS MASK	O	Not used in this set.

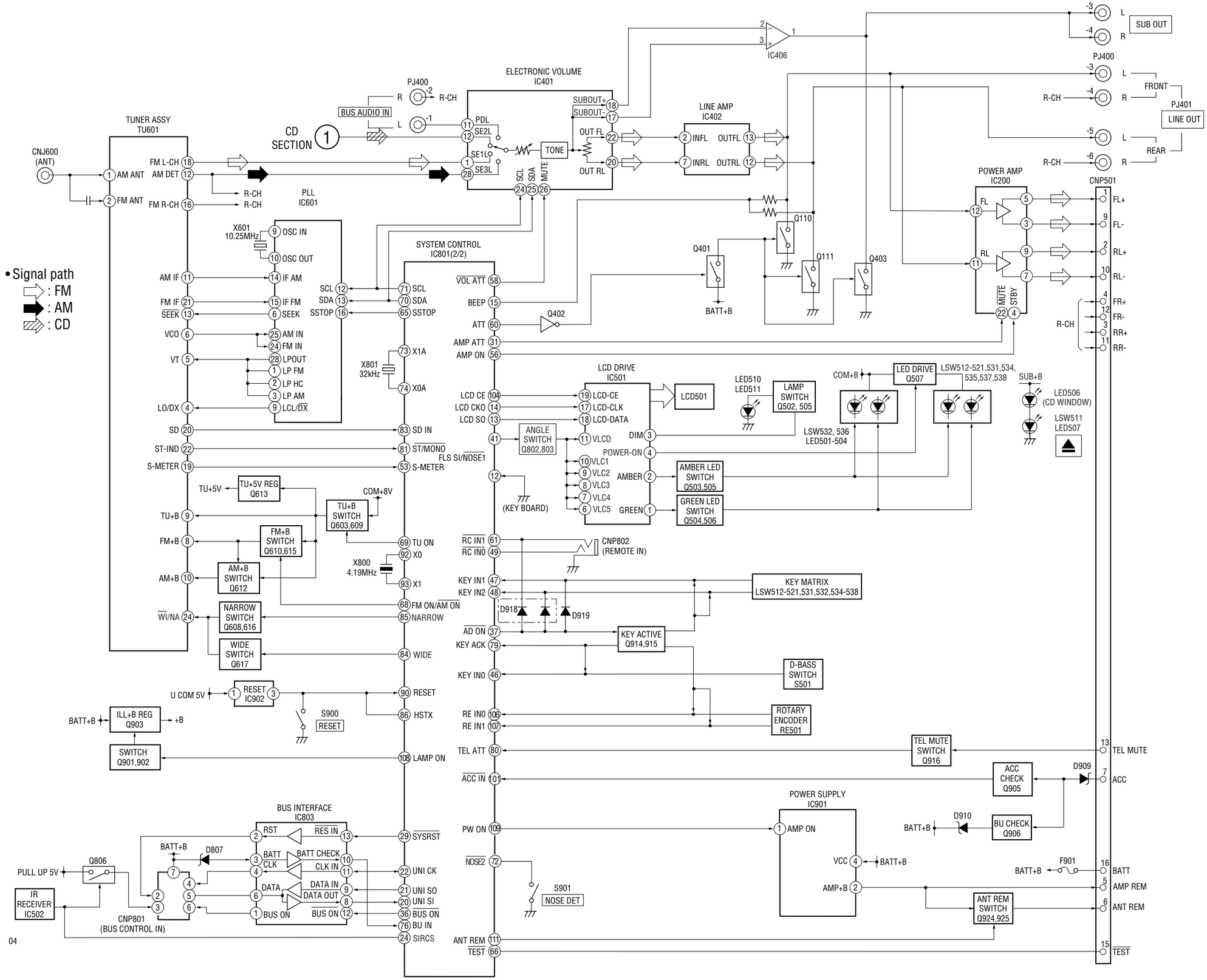
Pin No.	Pin Name	I/O	Pin Description
56	AMP ON	O	Power amplifier power control output
57	TXT ON	O	Reset output to CD-TEXT decoder IC.
58	$\overline{\text{VOL ATT}}$	O	Electric volume mute control output
59	NIL	—	Not used. (Open)
60	ATT	O	System attenuate control output
61	$\overline{\text{RC IN1}}$	I	Rotary commander shift key input 1
62	TU ATT	O	Tuner attenuate output (Not used in this set.)
63	VSS	—	Ground
64	NIL	—	Not used. (Open)
65	SSTOP	I	IF counter result signal detection input of PLL.
66	$\overline{\text{TEST}}$	I	Test mode initial setting detection input
67	DAVN	I	RDS IC data acquisition detection input (Fixed at “L” in this set.)
68	FM ON/$\overline{\text{AM ON}}$	O	FM ON output
69	TU ON	O	Tuner power control output
70	SDA	I/O	I²C BUS serial data input/output
71	SCL	O	I²C BUS serial clock output
72	$\overline{\text{NOSE2}}$	I	Front panel OPEN detection input (Not used in this set.)
73	X1A	O	Sub ceramic oscillator output (32 kHz)
74	X0A	I	Sub ceramic oscillator input (32 kHz)
75	SCOR	I	SCOR signal detection input
76	BU IN	I	Backup power detection input
77	DQSY	I	CD-TEXT data setting completion signal detection input
78	CD SENS	I	CD SENS signal detection input
79	KEY ACK	I	Key input acknowledge
80	TEL ATT	I	Telephone attenuate detection input
81	ST/MONO	I/O	Tuner stereo signal detection input/forced monaural output
82	$\overline{\text{SEEKOUT}}$	O	SEEK output
83	SD IN	I	Signal detector input
84	WIDE	O	WIDE/NARROW select output (Not used in this set.)
85	NARROW	O	WIDE/NARROW select output (Not used in this set.)
86	HSTX	—	Hardware standby input (Connect to pin ⑨⓪ (RESET).)
87	MD2	—	Operation mode input (Connect to ground in this set.)
88, 89	MD1, 0	—	Operation mode input (Connect to VCC in this set.)
90	$\overline{\text{RESET}}$	I	Reset input
91	VSS	—	Ground
92	X0	I	Main ceramic oscillator input (4.19 MHz)
93	X1	O	Main ceramic oscillator output (4.19 MHz)
94	VCC	—	Power supply pin (+5 V)
95	COM8V ON	O	COM 8V control output
96	NIL	—	Not used. (Open)
97	AREA1	I	Destination select input 1 (Fixed at “L” in this set.)
98	AREA2	I	Destination select input 2 (Fixed at “L” in this set.)
99	AREA3	I	Destination select input 3 (Fixed at “H” in this set.)
100	BAND	I	Not used in this set.
101	$\overline{\text{ACC IN}}$	I	Accessory power detection input
102, 103	PH3, 2	I	Disc insertion detection photo sensor input (Not used in this set.)
104	LCD CE	O	LCD chip enable output
105	$\overline{\text{FLS W}}$	I	Flash write input (Fixed at “H” in this set.)
106, 107	RE IN0, 1	I	Rotary encoder input
108	ILL ON	O	Illumination power control output
109	PW ON	O	System power control output
110	NIL	—	Not used. (Open)
111	ANT REM	O	ANT REMOTE power control output

Pin No.	Pin Name	I/O	Pin Description
112, 113	NIL	—	Not used. (Open)
114	CD LD	O	Loading motor control output (Loading direction)
115	CD EJ	O	Loading motor control output (Eject direction)
116	$\overline{\text{L SW}}$	I	Sled limit switch detection input
117	$\overline{\text{IN SW}}$/(PH1)	I	Disc insertion detection input
118	$\overline{\text{D SW}}$	I	DOWN switch detection input
119	VSS	—	Ground
120	$\overline{\text{SELF SW}}$/(IN SW)	I	Disc self store detection input

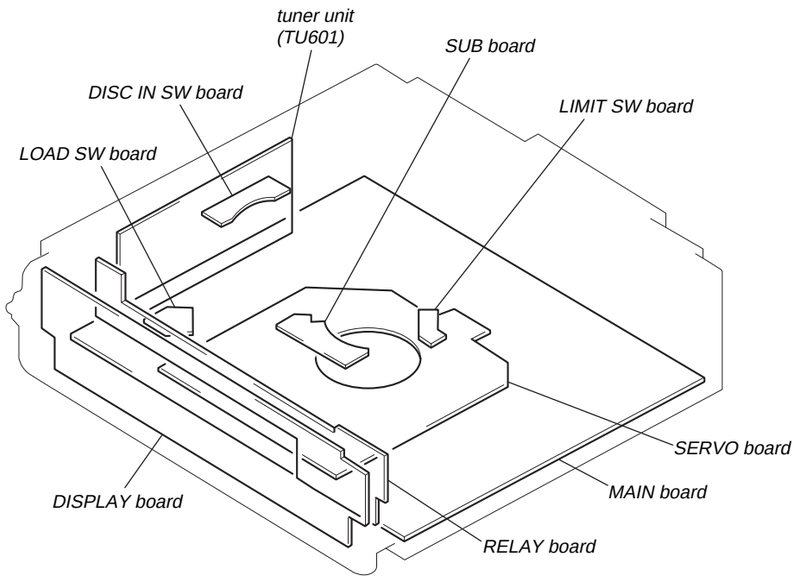
4-2. BLOCK DIAGRAM — CD SECTION —



4-3. BLOCK DIAGRAM — MAIN SECTION —



4-4. CIRCUIT BOARDS LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

for schematic diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : FM
  - ➡ : AM
  - ⇨ : CD

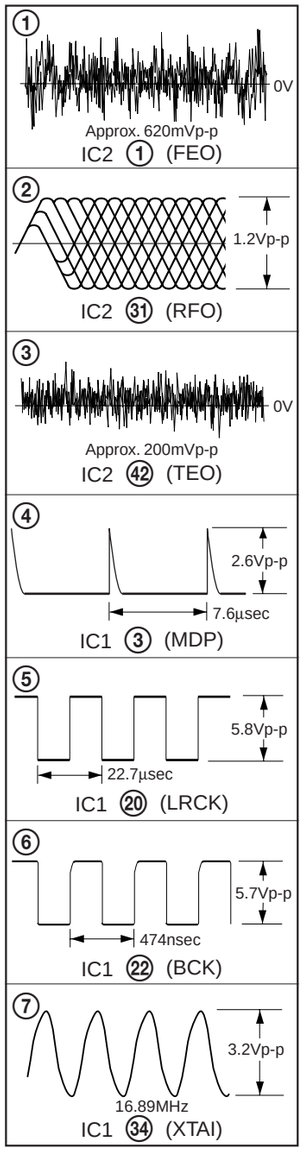
for printed wiring boards:

- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ○ : Through hole.
- ▒▒ : Pattern from the side which enables seeing. (The other layer's patterns are not indicated.)

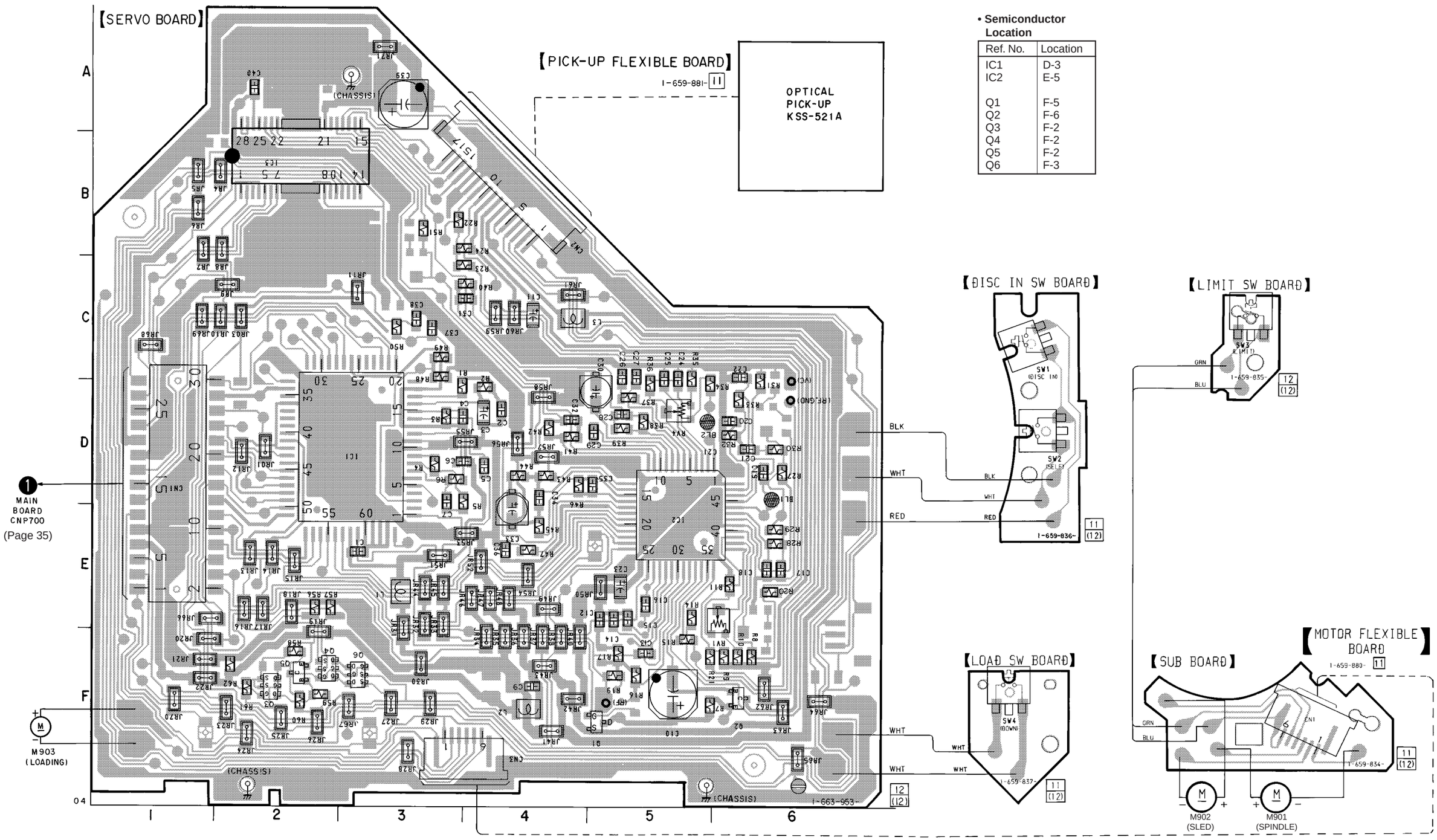
Caution:

Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

• Waveforms (MODE:PLAY)



4-5. PRINTED WIRING BOARDS — CD MECHANISM SECTION —

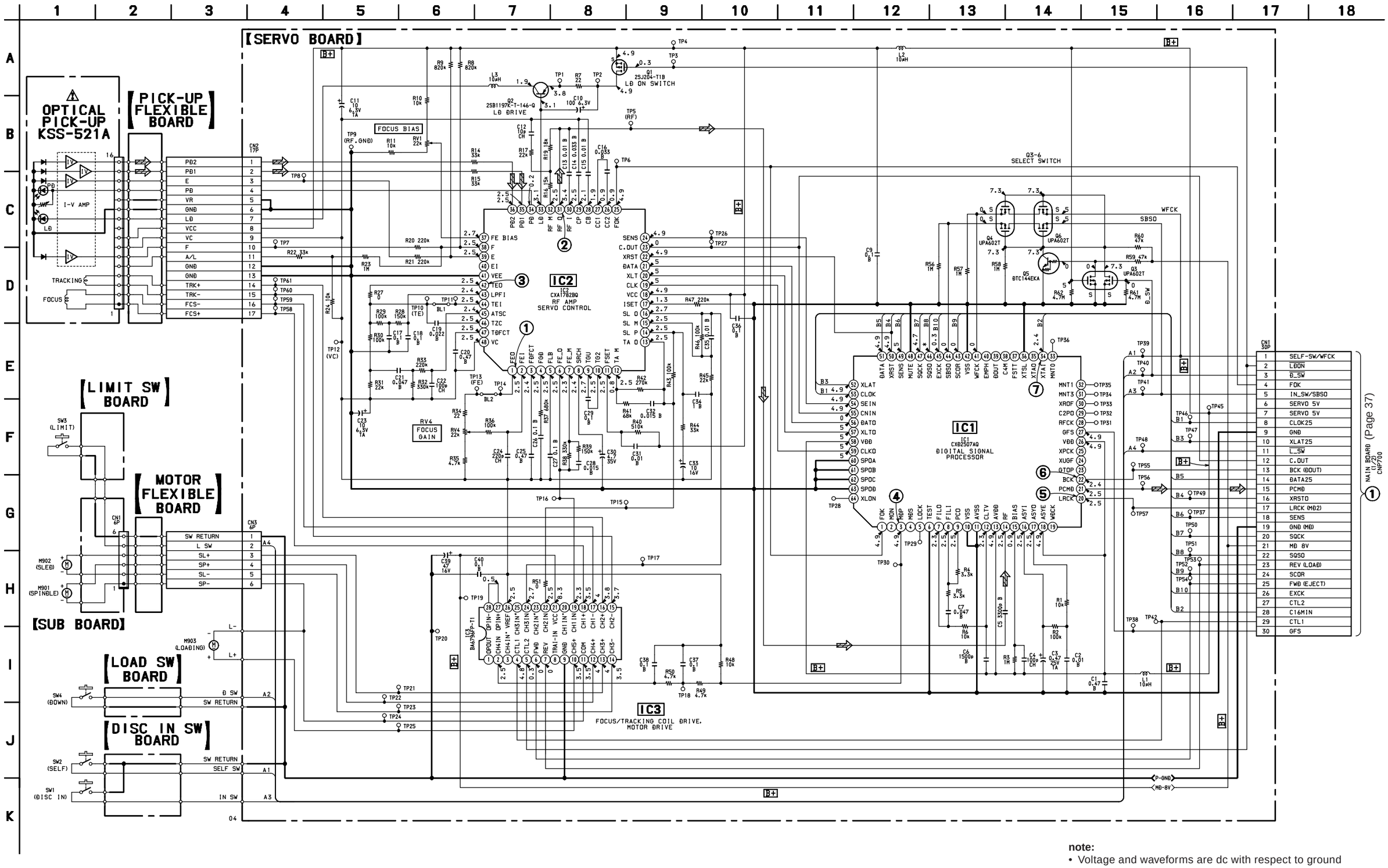


• **Semiconductor Location**

Ref. No.	Location
IC1	D-3
IC2	E-5
Q1	F-5
Q2	F-6
Q3	F-2
Q4	F-2
Q5	F-2
Q6	F-3

4-6. SCHEMATIC DIAGRAM — CD MECHANISM SECTION —

• Refer to page 28 for Waveforms.
• Refer to page 48 for IC Block Diagrams.



note:

- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
  ∗ : Impossible to measure

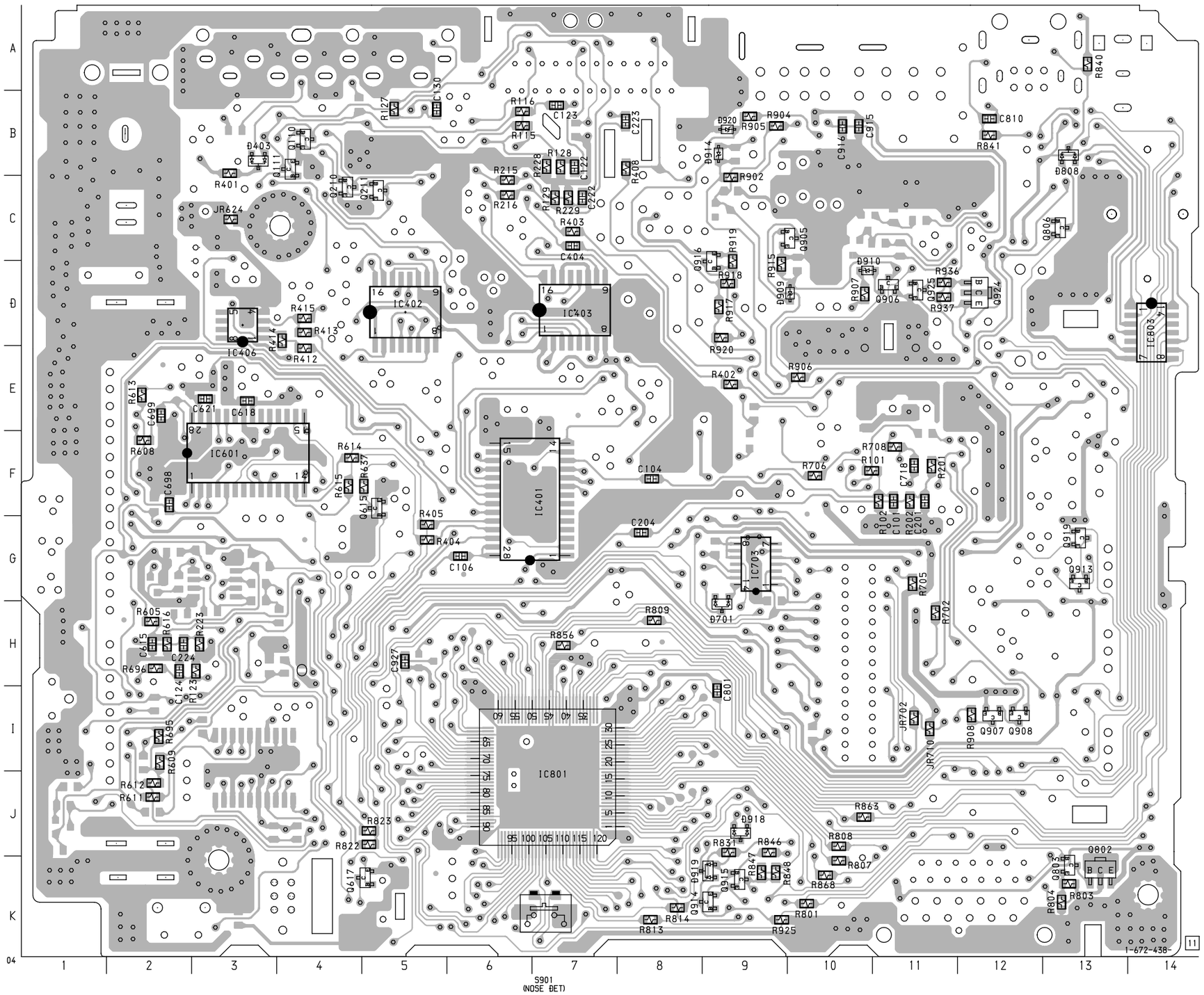
4-7. PRINTED WIRING BOARD — MAIN SECTION —

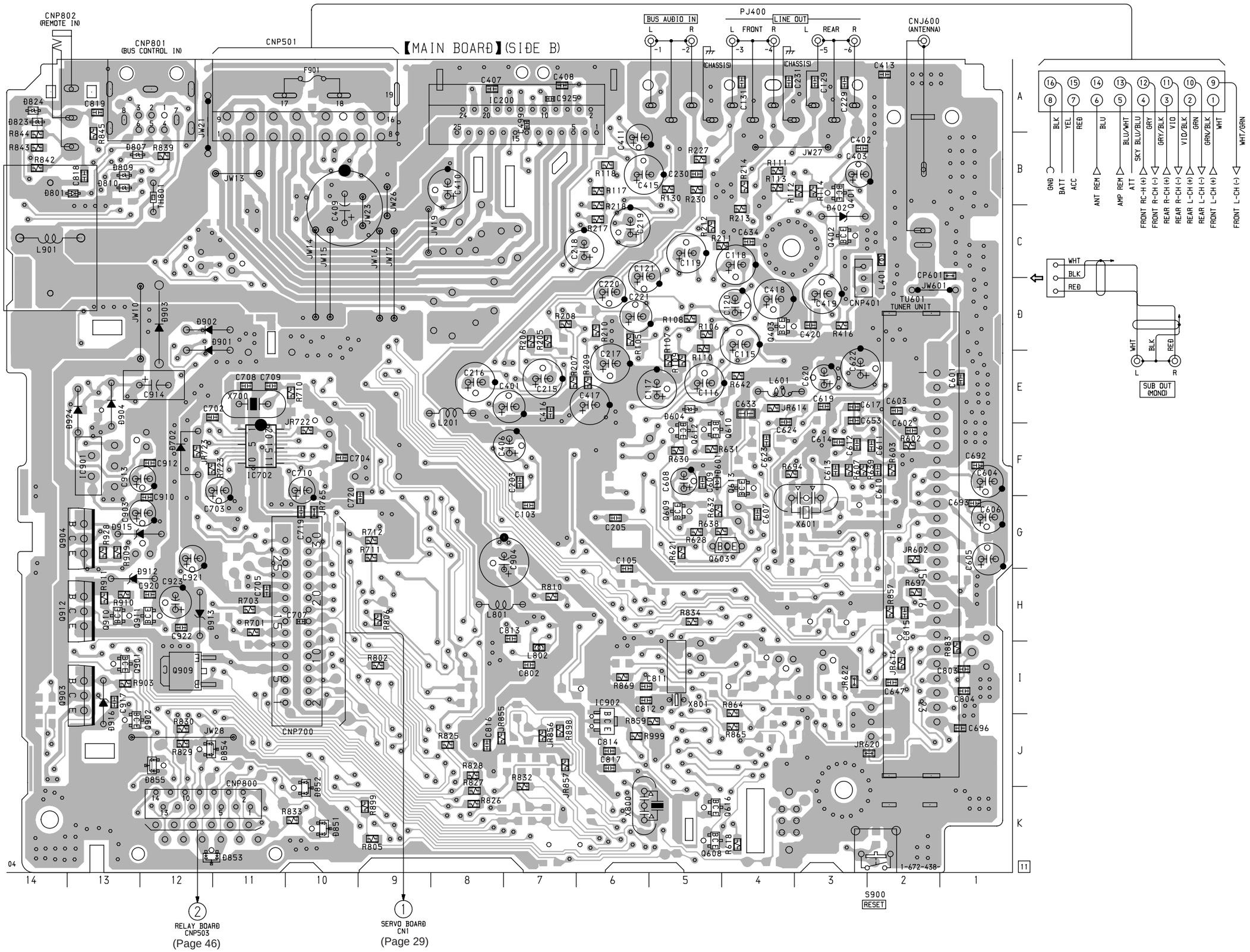
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
(D402)	C-3	IC801	J-7
D403	B-3	IC803	D-14
(D601)	F-5	(IC901)	F-13
(D604)	E-5	(IC902)	J-6
D701	H-9		
(D702)	F-12	Q110	B-4
(D801)	B-14	Q111	B-4
(D807)	B-13	Q210	C-4
D808	B-13	Q211	C-5
(D809)	B-13	(Q401)	B-3
(D810)	B-13	(Q402)	C-3
(D823)	A-14	(Q603)	G-5
(D824)	A-14	(Q608)	K-5
(D851)	K-10	(Q609)	G-5
(D852)	K-10	(Q610)	F-5
(D853)	K-12	(Q612)	F-5
(D854)	J-11	(Q613)	F-4
(D856)	J-12	Q615	F-5
(D901)	D-12	(Q616)	K-5
(D902)	D-12	Q617	K-5
(D903)	D-12	Q802	K-13
(D904)	E-13	Q803	K-13
D909	D-10	Q806	C-13
D910	D-10	(Q901)	I-13
(D912)	H-13	(Q902)	I-13
(D913)	H-12	(Q903)	I-13
D914	B-9	(Q904)	G-13
(D915)	G-13	Q905	C-10
(D916)	I-13	Q906	D-11
D918	J-9	Q907	I-12
D919	K-9	Q908	I-12
D920	B-9	(Q909)	I-12
(D924)	E-13	(Q910)	H-13
		(Q911)	H-12
(IC200)	A-7	(Q912)	H-13
IC401	F-6	Q913	G-13
IC402	D-5	Q914	K-9
IC403	D-7	Q915	K-9
IC406	D-3	Q916	C-8
IC601	F-3	Q919	G-13
(IC702)	F-11	Q924	D-12
IC703	G-9	Q925	D-11

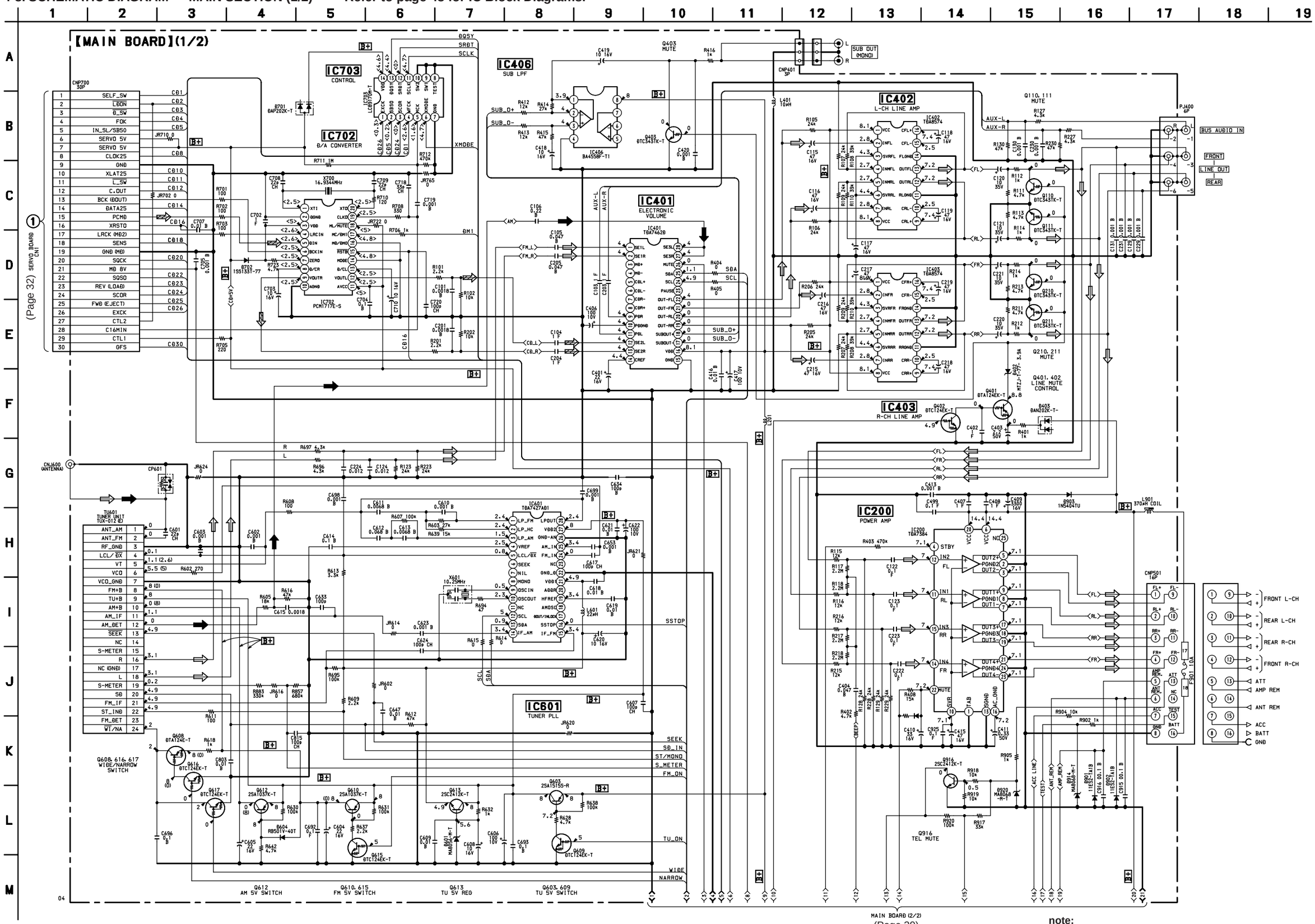
( ): SIDE B

【MAIN BOARD】(SIDE A)




【MAIN BOARD】(SIDE B)
CNP802
(REMOTE IN)
CNP801
(BUS CONTROL IN)
CNP501
BUS AUDIO IN
PJ400
LINE OUT
FRONT
REAR
CNJ600
(ANTENNA)
(CHASSIS)
GND
BATT
ACC
ANT REM
AMP REM
ATT
FRONT RC-H (+)
FRONT R-CH (-)
REAR R-CH (+)
REAR R-CH (-)
REAR L-CH (+)
REAR L-CH (-)
FRONT L-CH (+)
FRONT L-CH (-)
WHT/GRN
TU601
TUNER UNIT
CP601
JW601
CNP401
SUB OUT
(MONO)
CNP700
CNP800
IC901
IC702
IC902
X700
X601
X801
X8009
L901
L201
L401
L601
L801
L802
S900
RESET
1-672-438-
RELAY BOARD
CNP503
(Page 46)
SERVO BOARD
CN1
(Page 29)

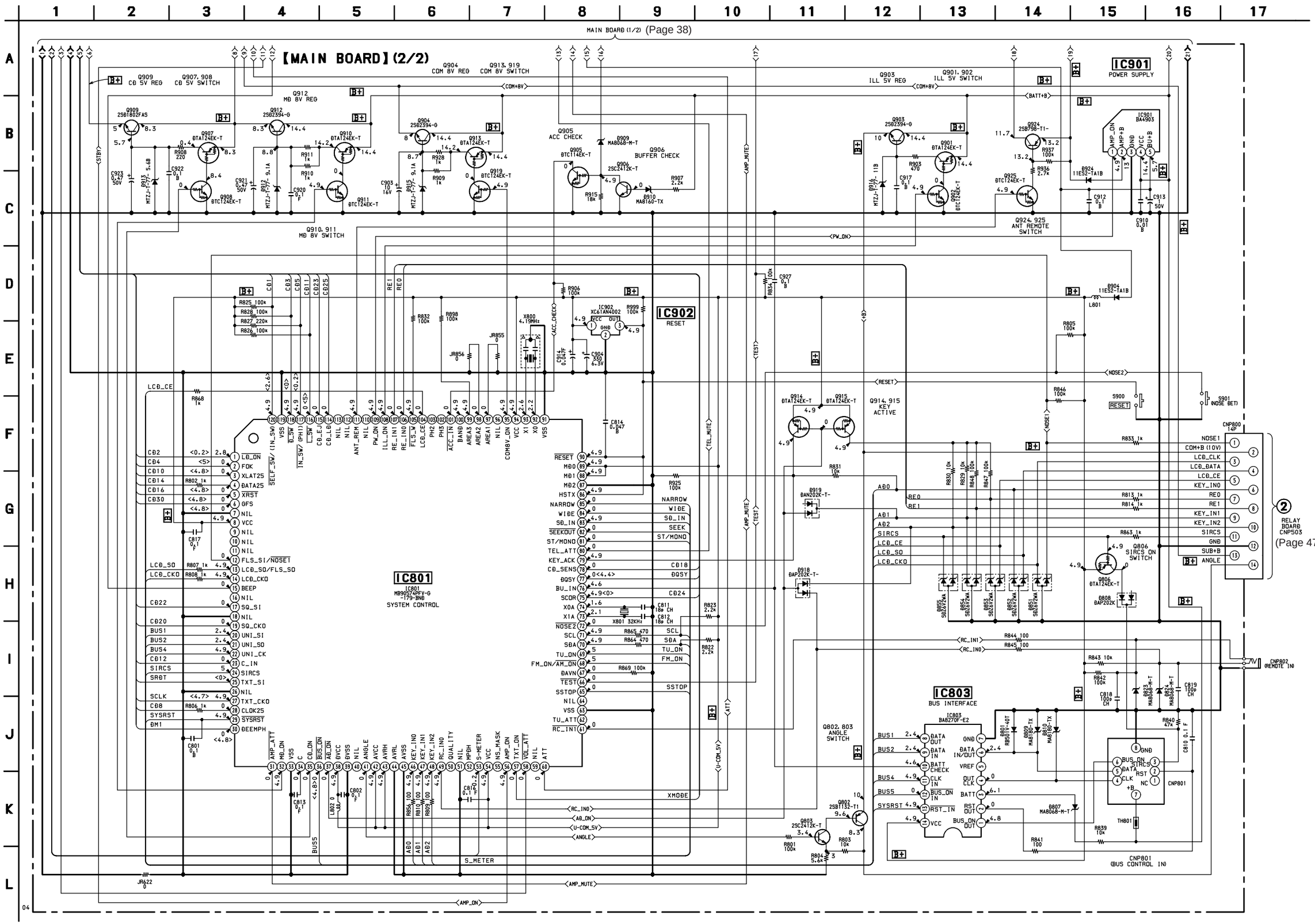
4-8. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) — • Refer to page 48 for IC Block Diagrams.



note:

- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : AM
  < > : CD PLAY

4-9. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) — • Refer to page 50 for IC Block Diagrams.

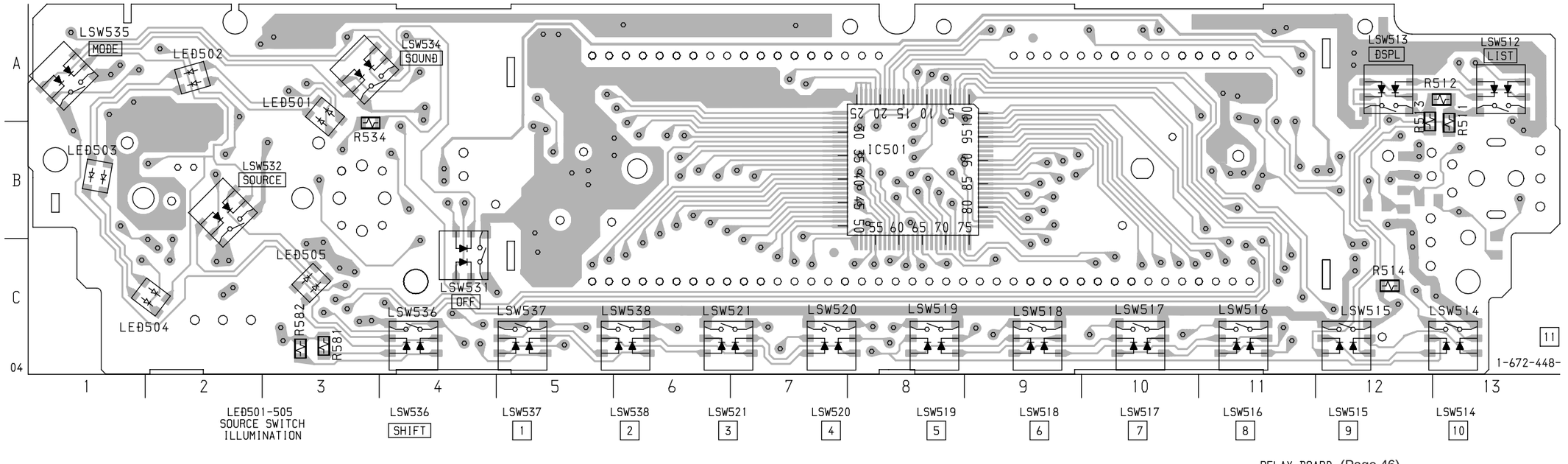


note:

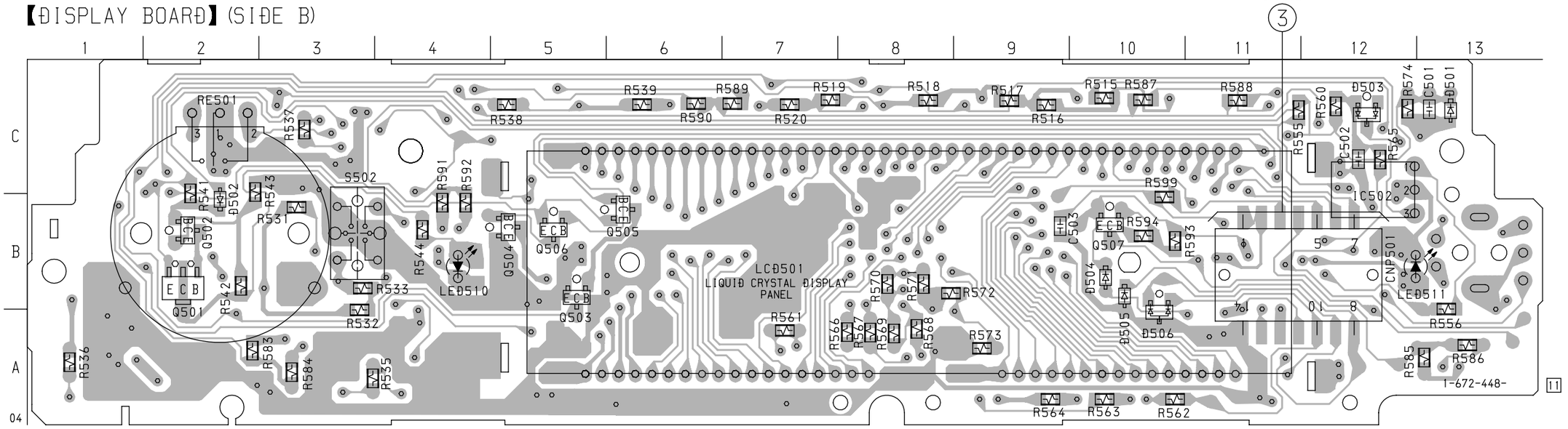
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : AM
  < > : CD PLAY

4-10. PRINTED WIRING BOARD — DISPLAY SECTION —

【DISPLAY BOARD】(SIDE A)



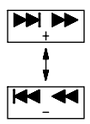
【DISPLAY BOARD】(SIDE B)



RELAY BOARD (Page 46)
CNP502

RE501
ROTARY ENCODER

S502
SEEK/AMS

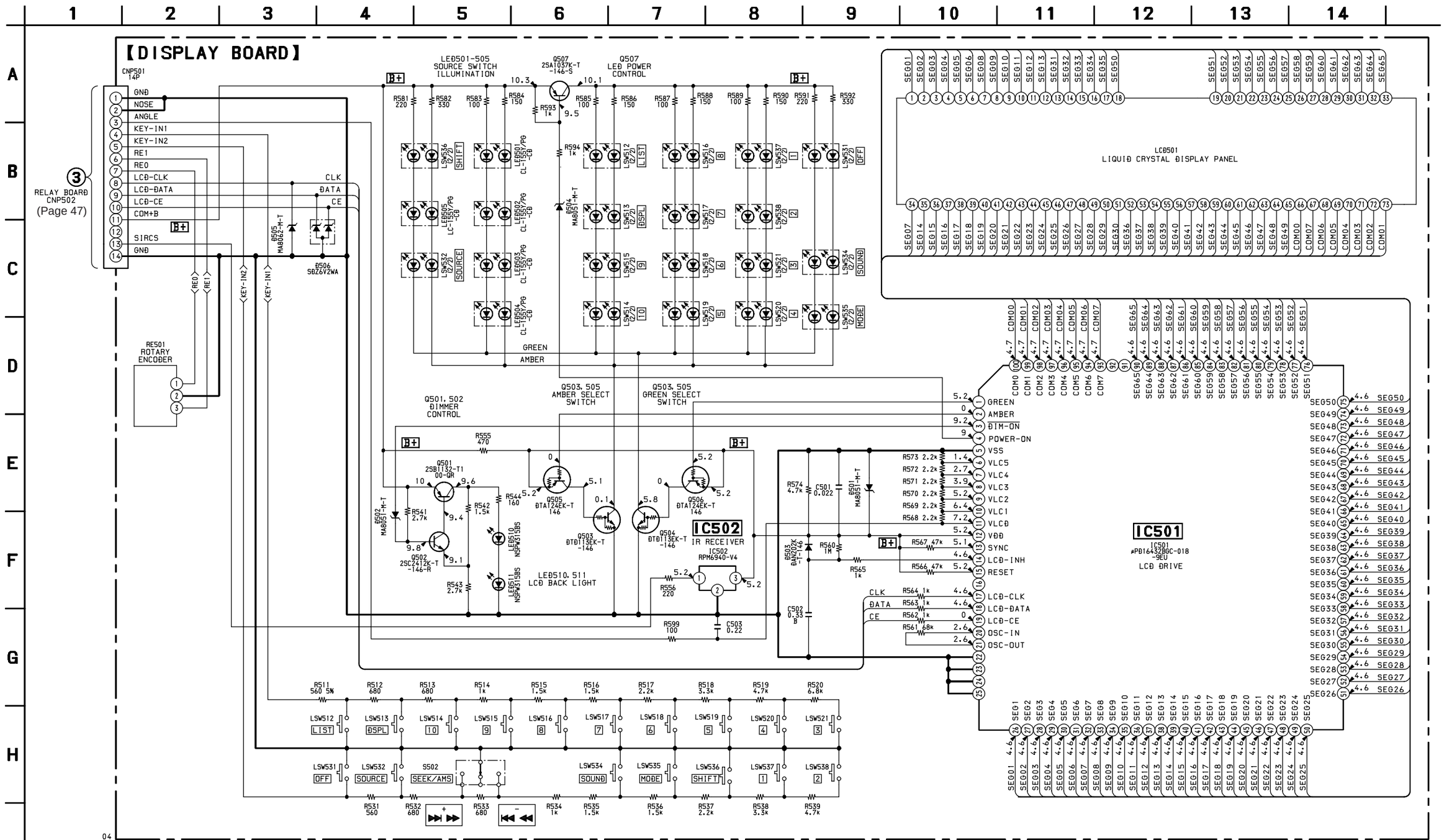


• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
(D501)	C-13	LED504	C-2
(D502)	B-2	LED505	C-3
(D503)	C-12	(LED510)	B-4
(D504)	B-10	(LED511)	B-13
(D505)	A-10		
(D506)	A-10	(Q501)	B-2
		(Q502)	B-2
IC501	B-8	(Q503)	B-5
(IC502)	B-12	(Q504)	B-5
		(Q505)	B-6
LED501	A-3	(Q506)	B-5
LED502	A-2	(Q507)	B-10
LED503	B-1		

( ): SIDE B

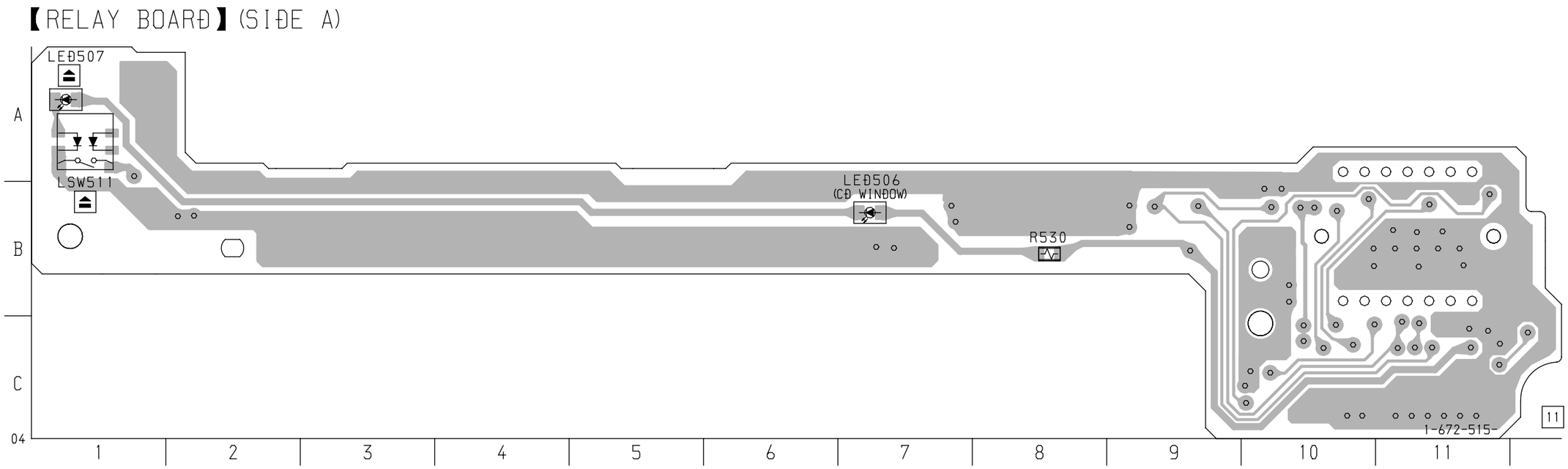
4-11. SCHEMATIC DIAGRAM — DISPLAY SECTION —

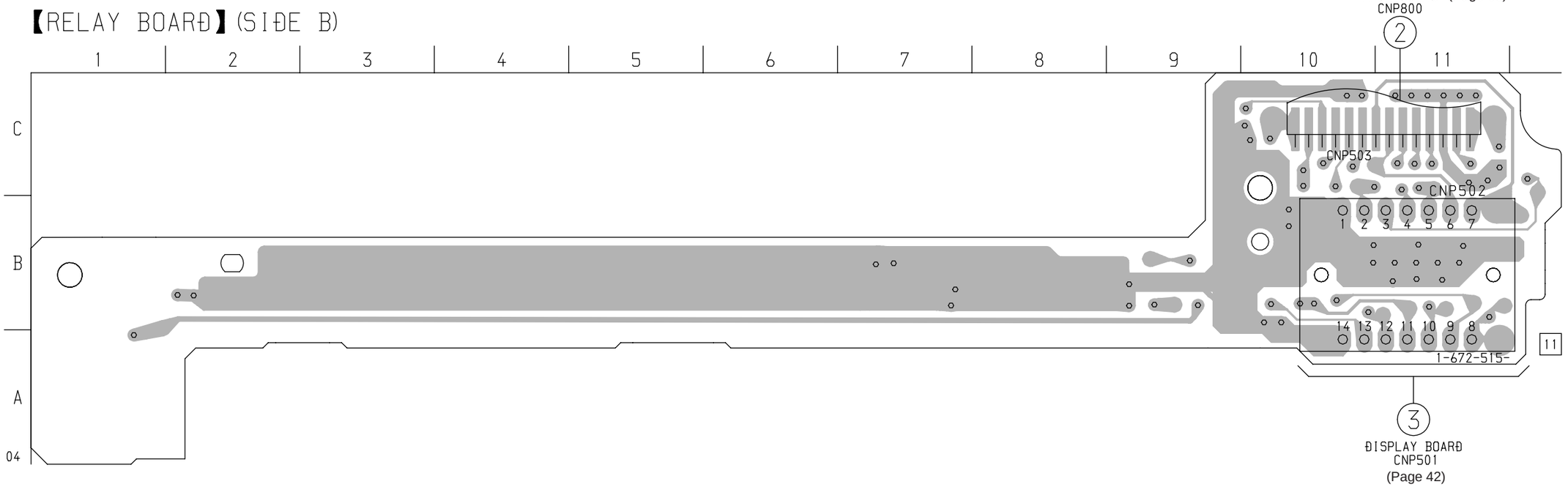


note:

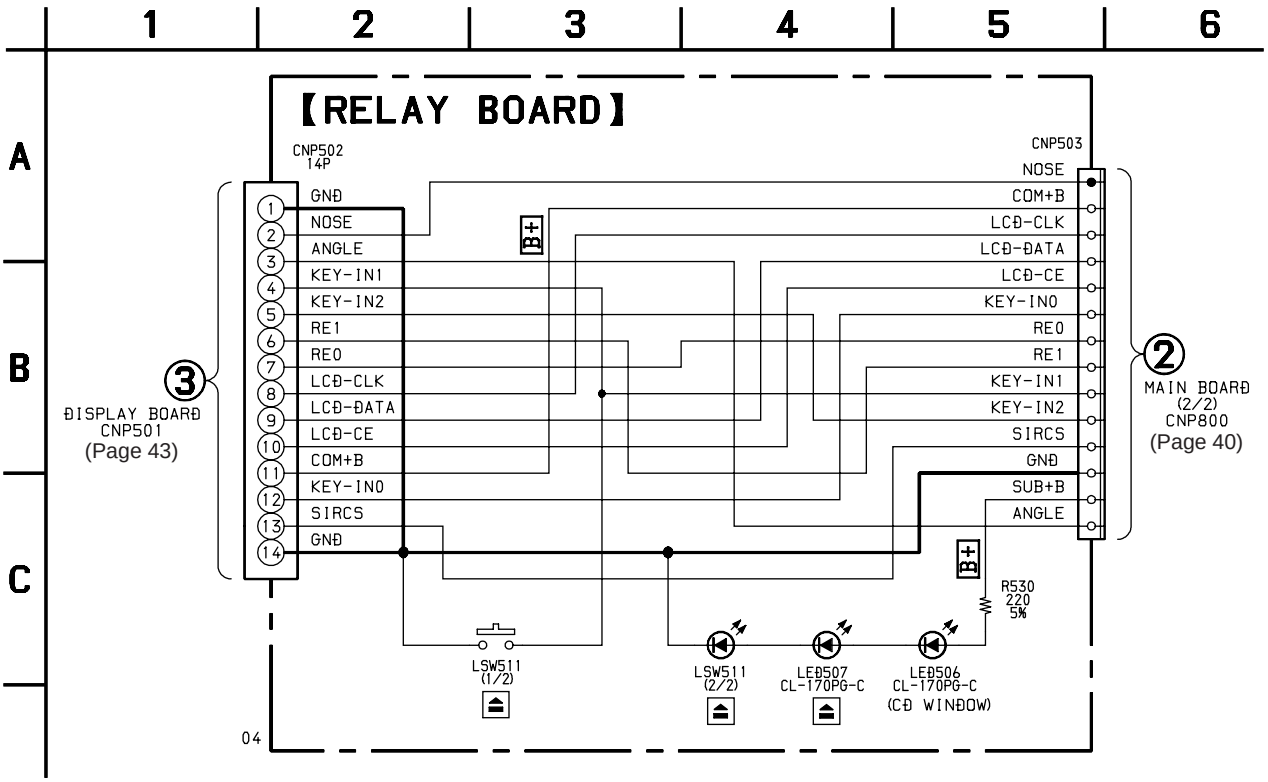
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM

4-12. PRINTED WIRING BOARD — RELAY SECTION —



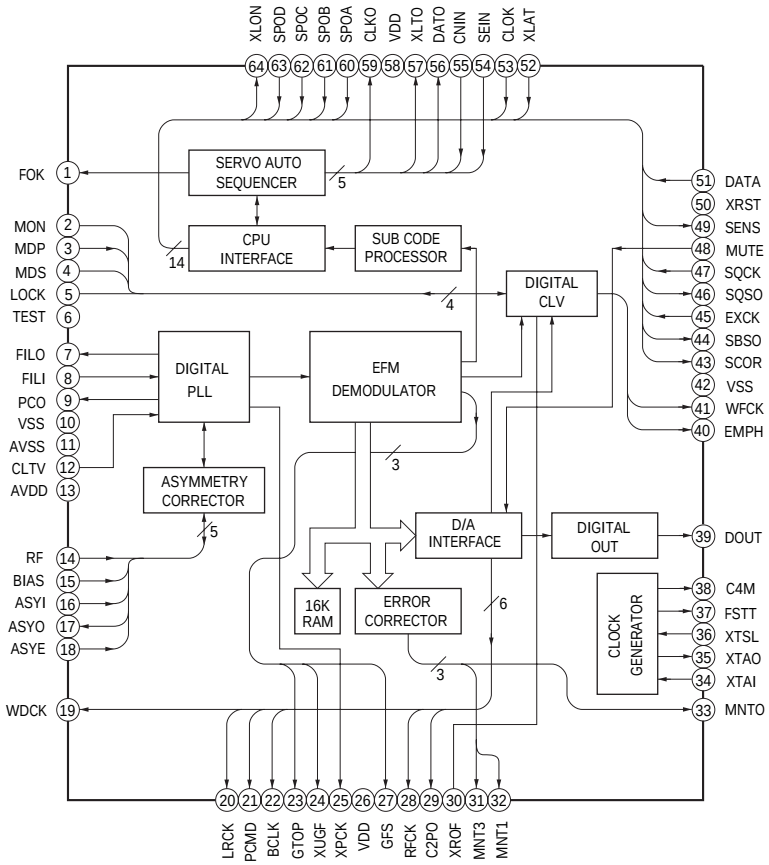


4-13. SCHEMATIC DIAGRAM — RELAY SECTION —

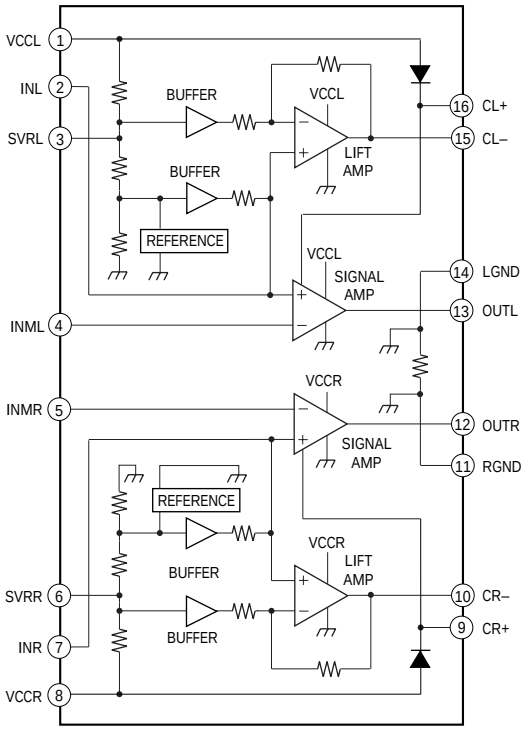


• **IC Block Diagrams**

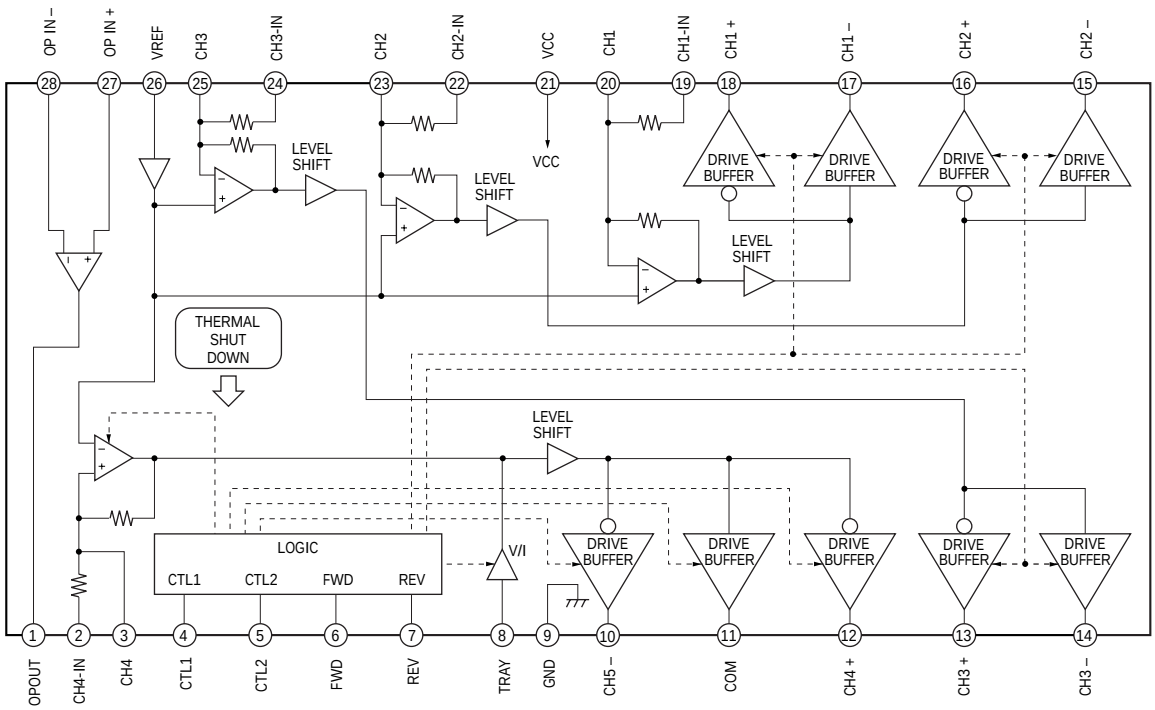
IC1 CXD2507AQ



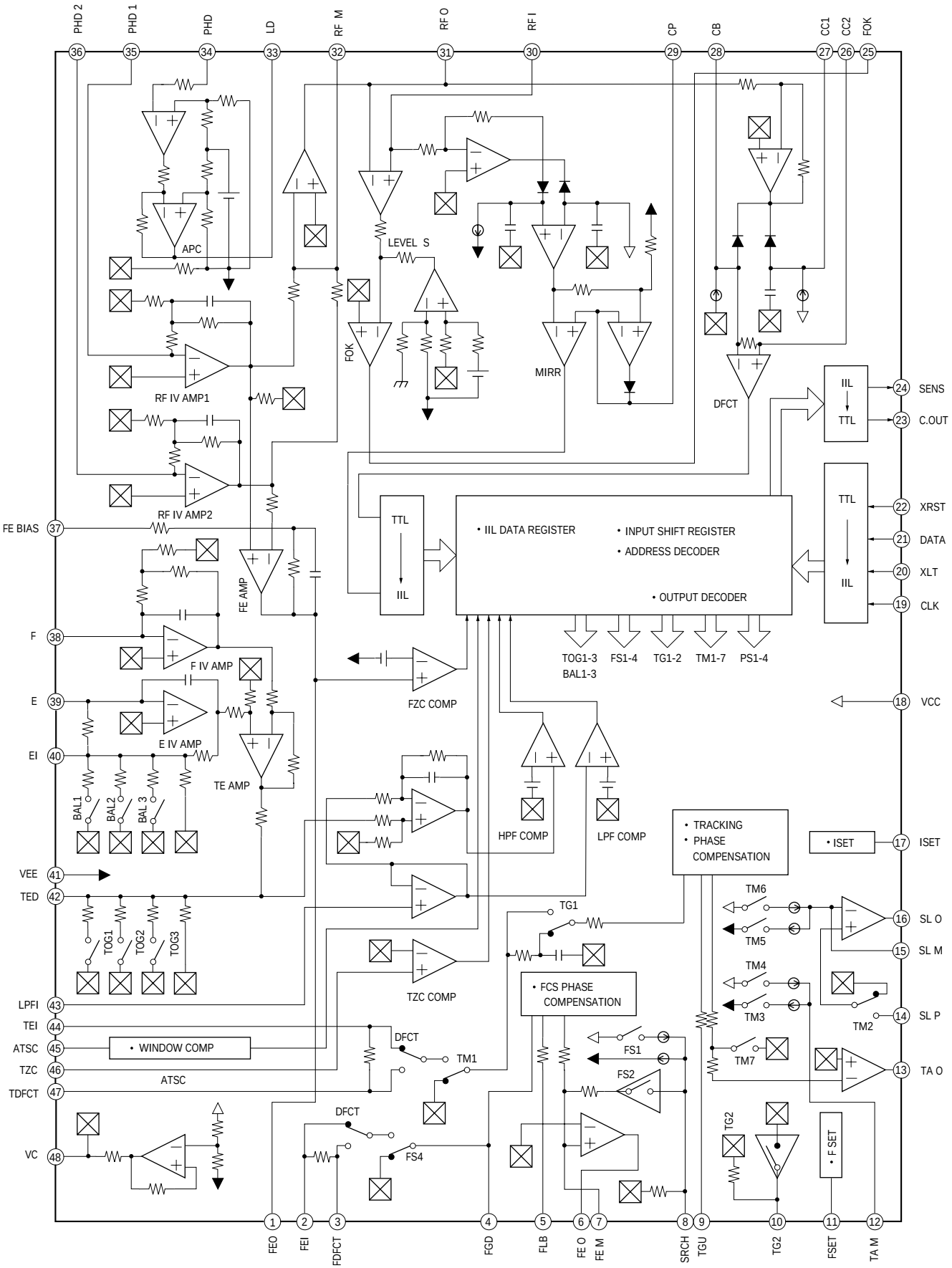
IC402, 403 TDA8574



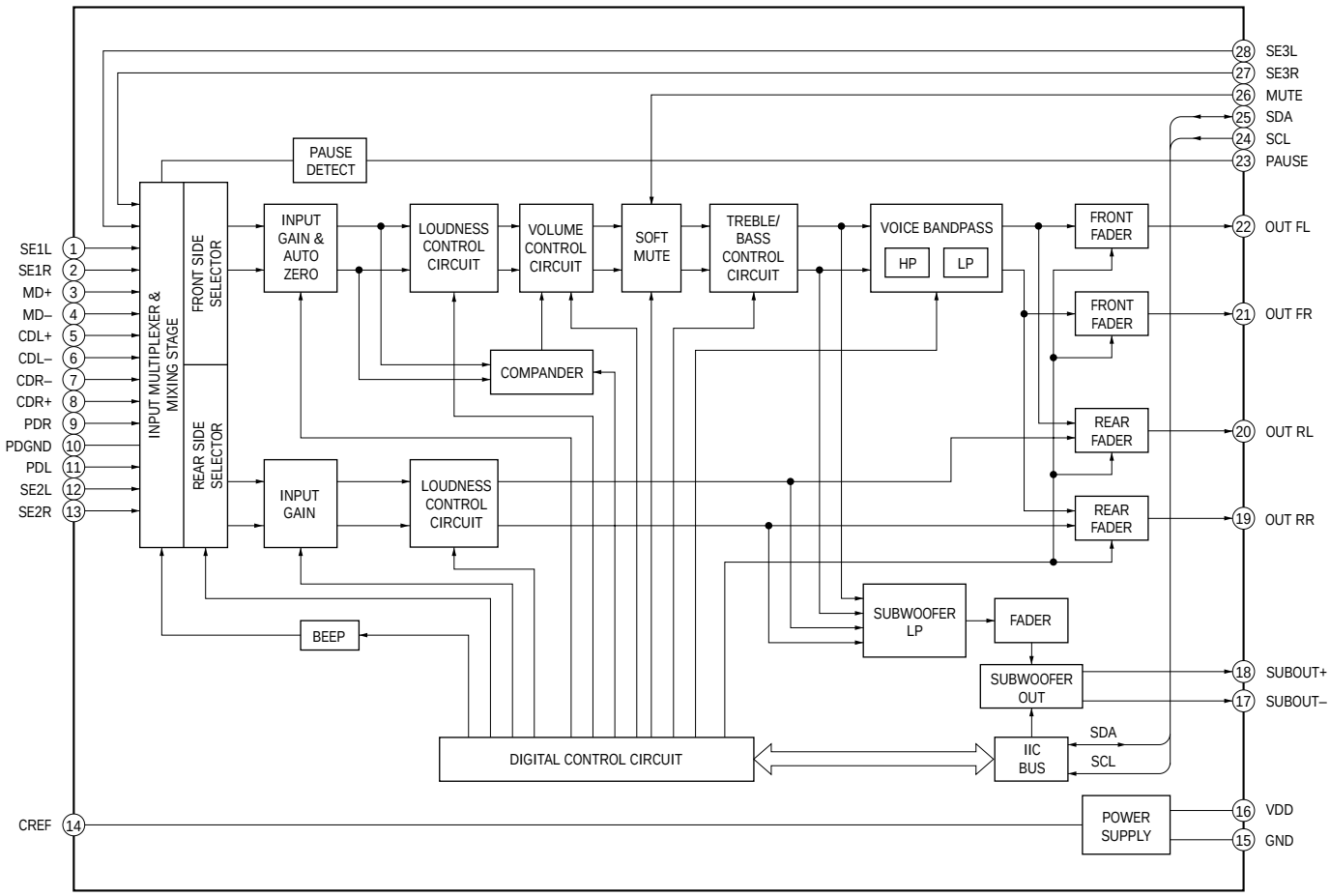
IC3 BA6796FP-T1



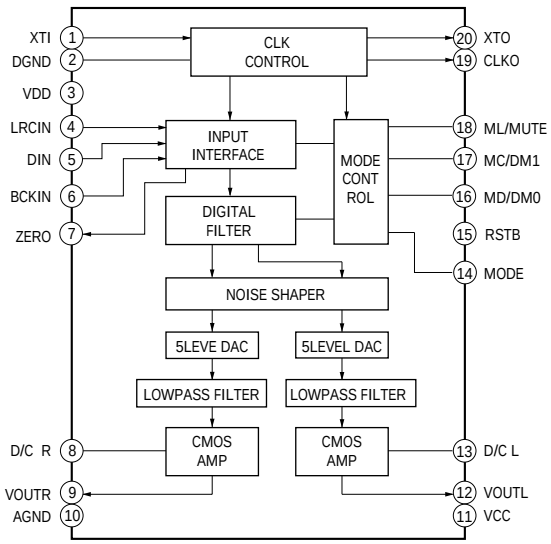
IC2 CXA1782BQ



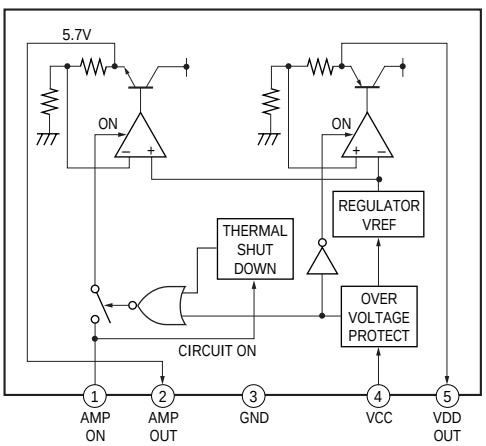
IC401 TDA7462D



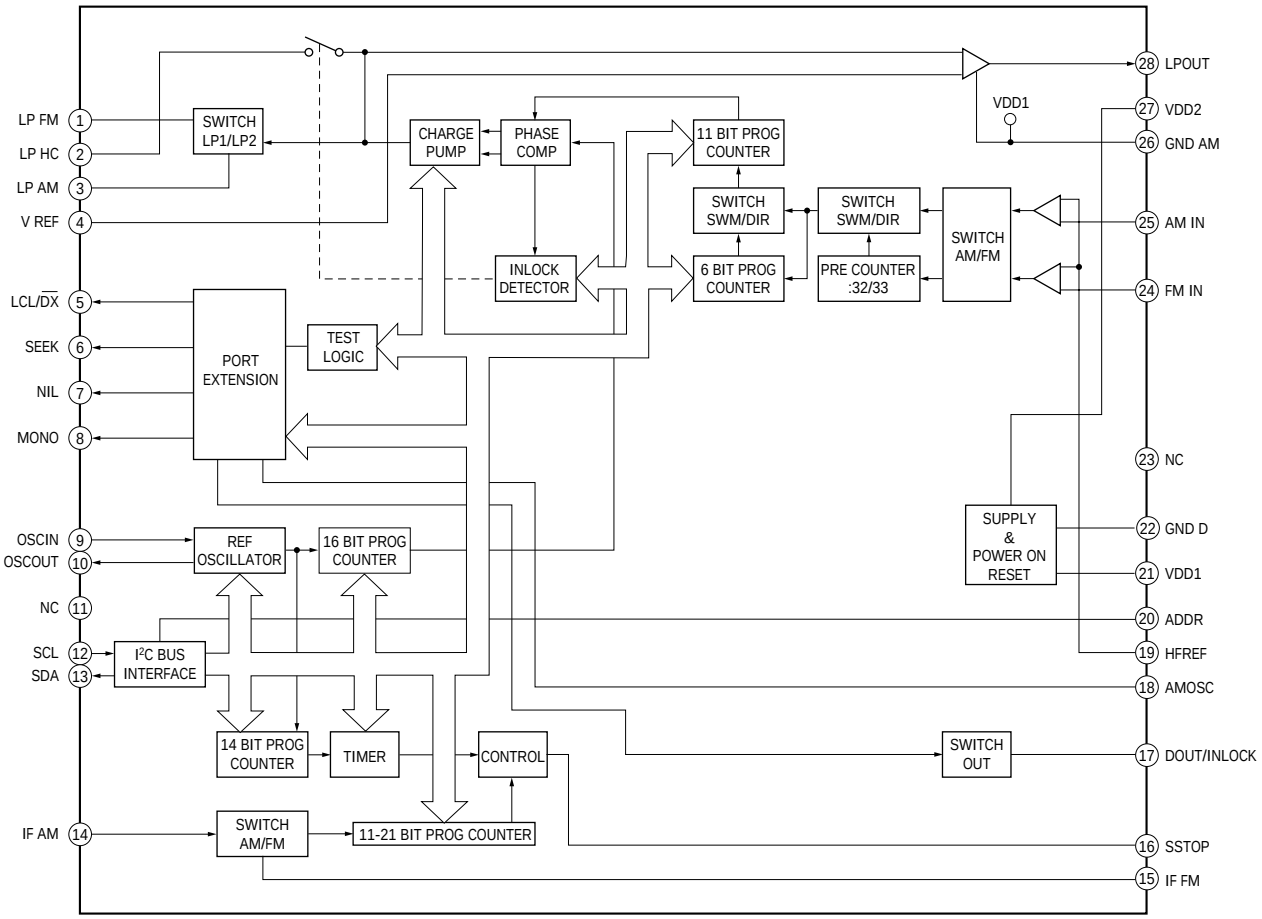
IC702 PCM1717E-S



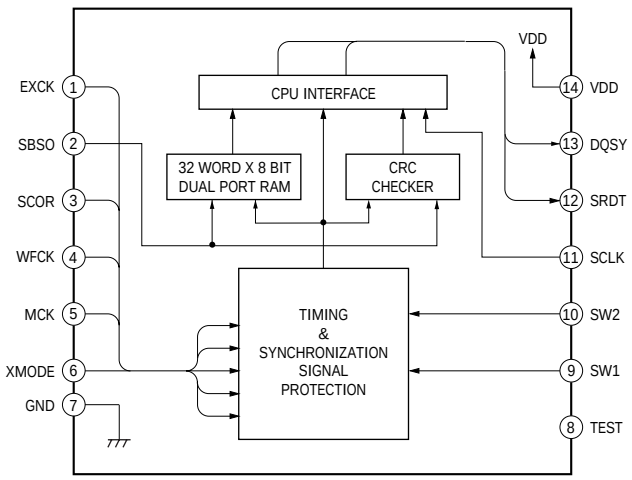
IC901 BA4903



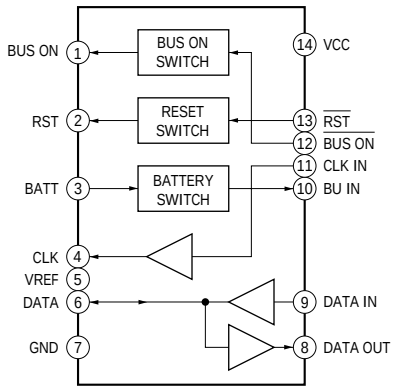
IC601 TDA7427AD1



IC703 LC89170M-T



IC803 BA8270F-E2



SECTION 5
EXPLODED VIEWS

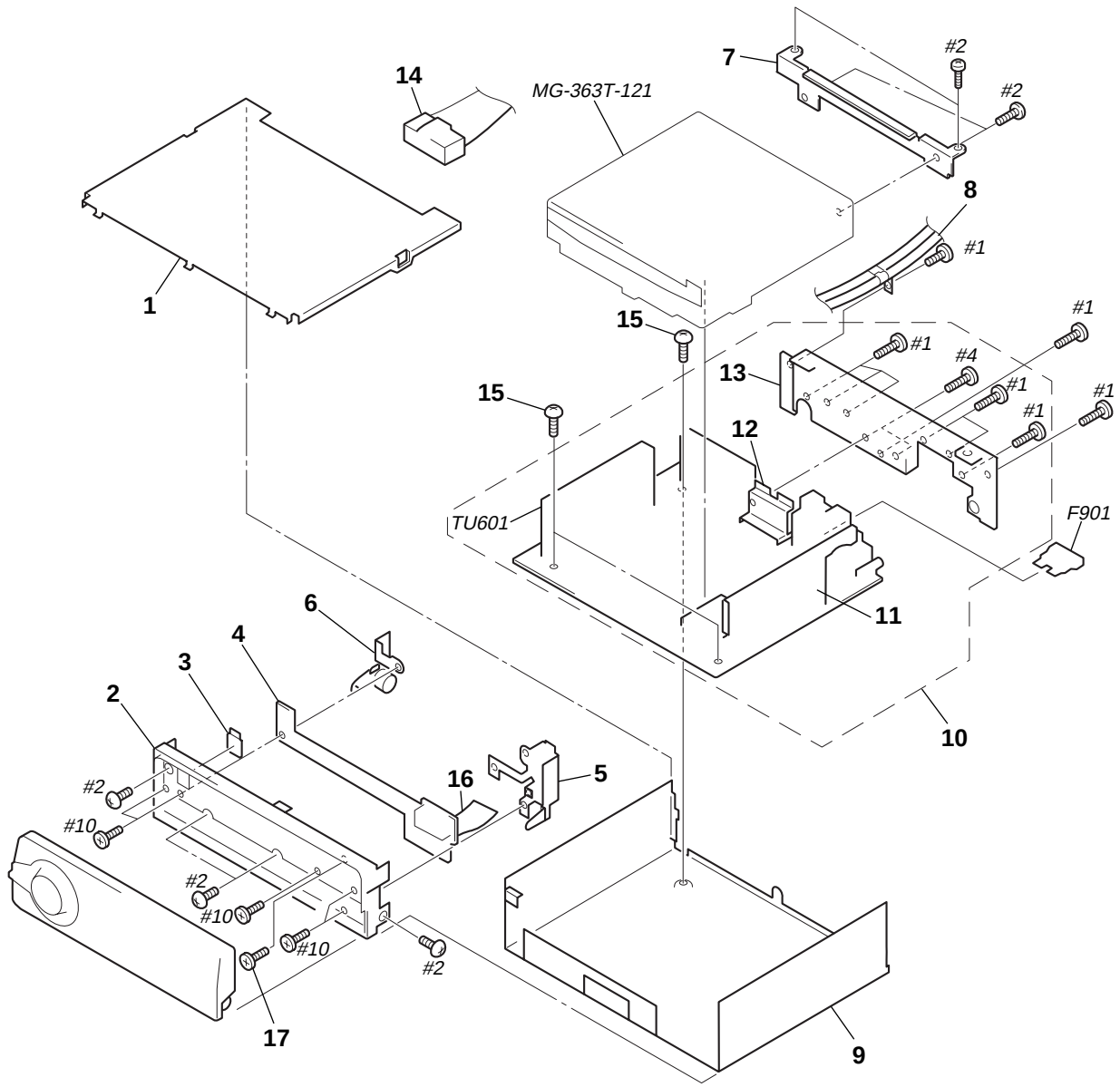
NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Accessories and packing materials and hardware (# mark) list are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

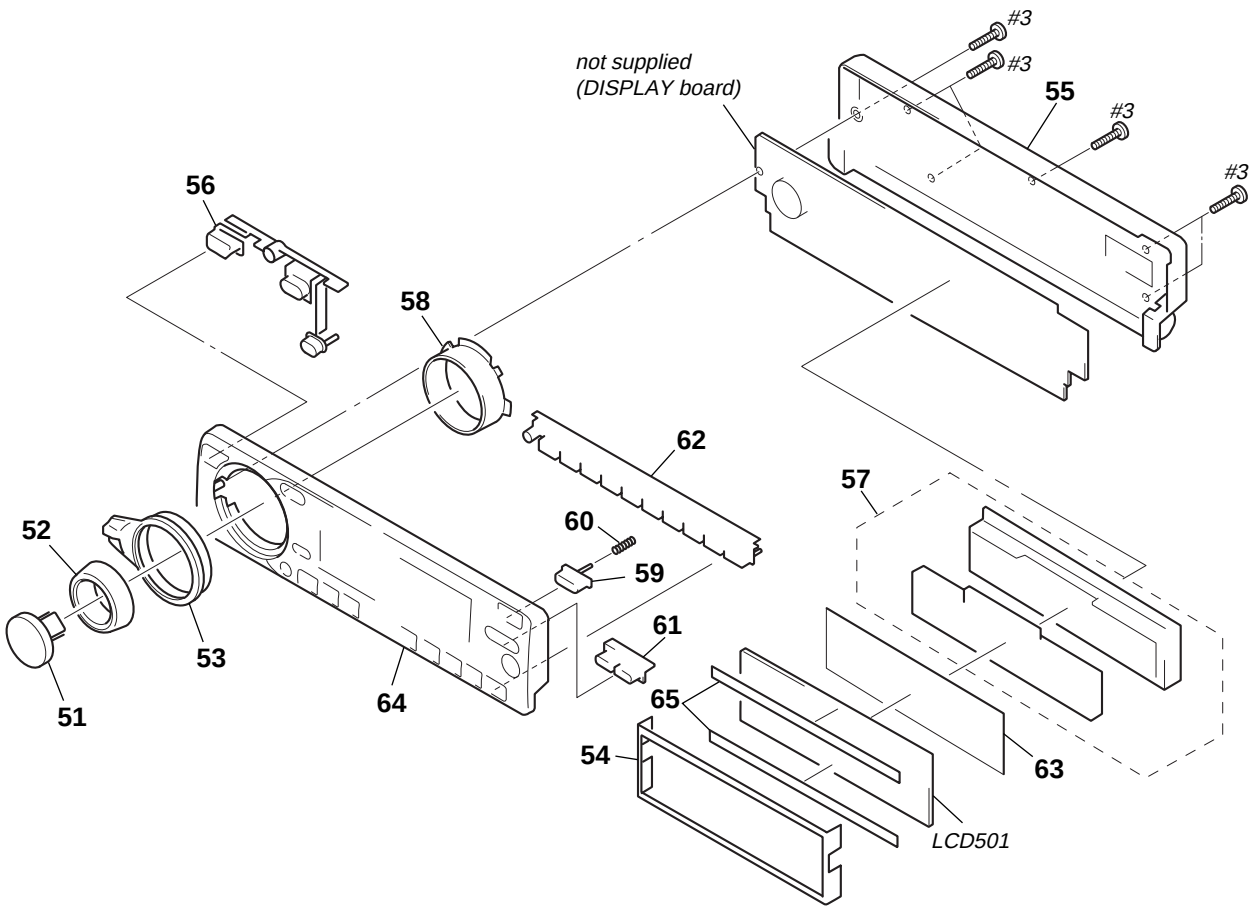
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

5-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 1	3-030-925-01	COVER	
2	X-3376-688-1	PANEL ASSY, SUB	
3	3-030-936-01	BUTTON (EJECT)	
* 4	1-672-515-11	RELAY BOARD	
5	X-3376-687-1	LOCK ASSY	
6	X-3376-686-1	GEAR ASSY	
* 7	3-030-927-01	BRACKET (MD)	
8	1-790-375-11	CORD (WITH CONNECTOR) (SUB OUT)	
* 9	3-030-926-01	CHASSIS	
* 10	A-3294-601-A	MAIN BOARD, COMPLETE	
* 11	3-030-928-01	HEAT SINK (REG)	
* 12	3-019-565-01	BRACKET (IC)	
* 13	3-030-967-01	HEAT SINK	
14	1-776-207-82	CORD (WITH CONNECTOR) (POWER)	
15	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
16	1-790-482-11	CABLE, FLAT (FFC) 14P	
17	3-035-250-01	SCREW (LOCK)	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
TU601	A-3282-045-A	TUNER UNIT (TUX-012(E))	

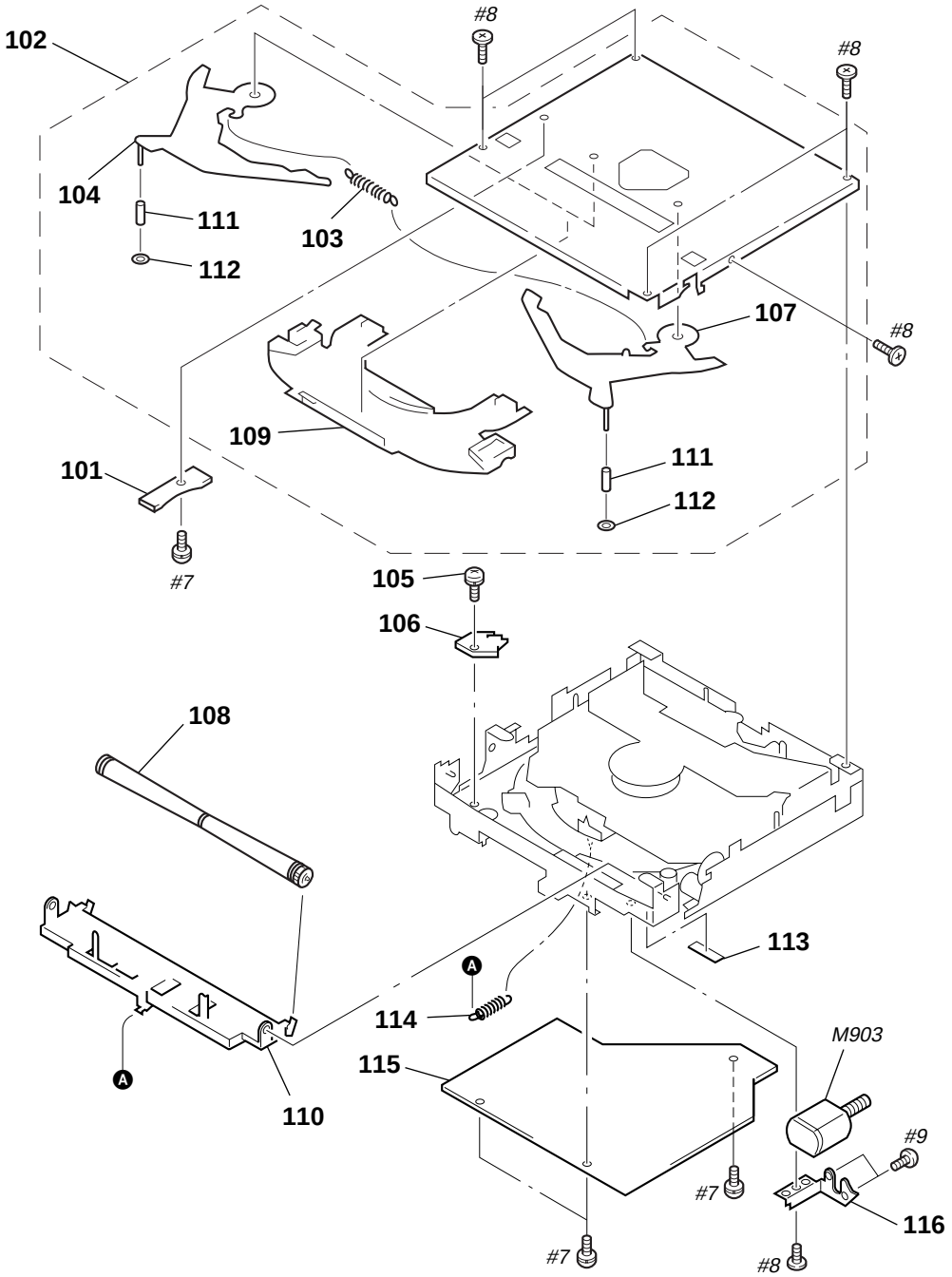
5-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-030-947-01	BUTTON (SOURCE)	
52	3-030-943-01	KNOB (VOL)	
53	3-030-944-01	LEVER (SEEK/AMS)	
* 54	3-030-932-01	PLATE (LCD), GROUND	
55	X-3376-696-1	PANEL ASSY, FRONT BACK	
56	3-030-948-01	BUTTON (MODE)	
* 57	X-3376-697-1	HOLDER ASSY, LCD	
58	3-030-945-01	RING	

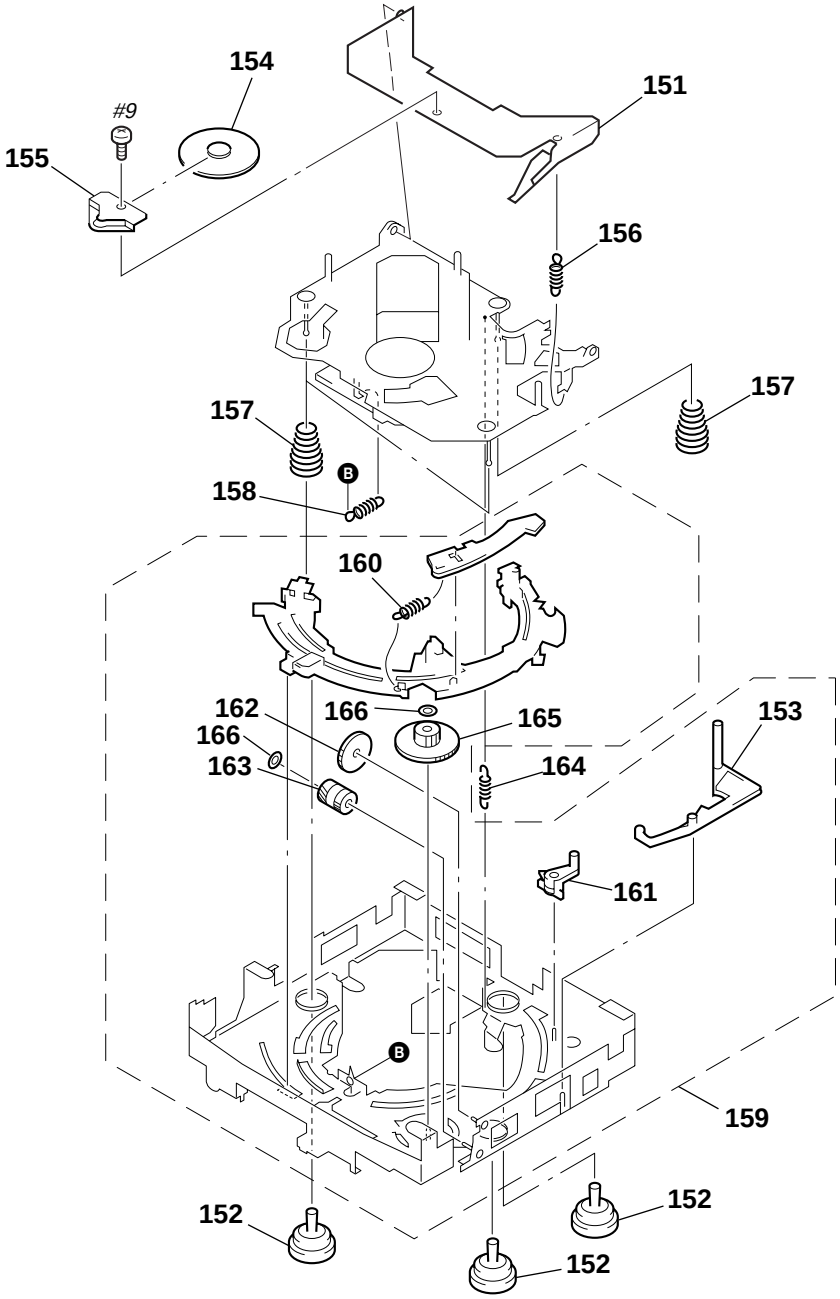
Ref. No.	Part No.	Description	Remark
59	3-030-950-01	BUTTON (OPEN)	
60	3-032-321-01	SPRING (OPEN)	
61	3-030-942-01	BUTTON (DSPL)	
62	3-030-949-01	BUTTON (1-10)	
* 63	3-030-933-01	SHEET (DIFFUSION)	
64	X-3376-698-1	PANEL (S) ASSY, FRONT	
* 65	3-032-271-01	SHEET (S), LCD	
LCD501	1-803-444-11	DISPLAY PANEL, LIQUID CRYSTAL	

5-3. CD MECHANISM SECTION (1)
(MG-363T-121)



Ref. No.	Part No.	Description	Remark
* 101	1-659-836-11	DISC IN SW BOARD	
* 102	A-3291-816-B	CHASSIS (T) SUB ASSY	
103	3-931-909-01	SPRING (LR), TENSION	
104	X-3371-501-1	LEVER (L) ASSY	
105	3-338-737-01	SCREW (2X3), + PS	
* 106	1-659-837-11	LOAD SW BOARD	
107	X-3371-502-1	LEVER (R) ASSY	
108	A-3301-203-A	ROLLER ASSY	
109	3-931-908-01	GUIDE (DISC)	
110	3-931-902-04	ARM (ROLLER)	
111	3-936-756-01	ROLLER (D)	
112	3-321-393-01	WASHER, STOPPER	
* 113	3-939-139-01	SPACER	
114	3-931-916-01	SPRING (RA), TENSION	
* 115	A-3309-694-A	SERVO BOARD, COMPLETE	
* 116	3-007-530-01	BRACKET (MOTOR)	
M903	A-3291-676-A	MOTOR SUB ASSY, LOADING (LOADING)	

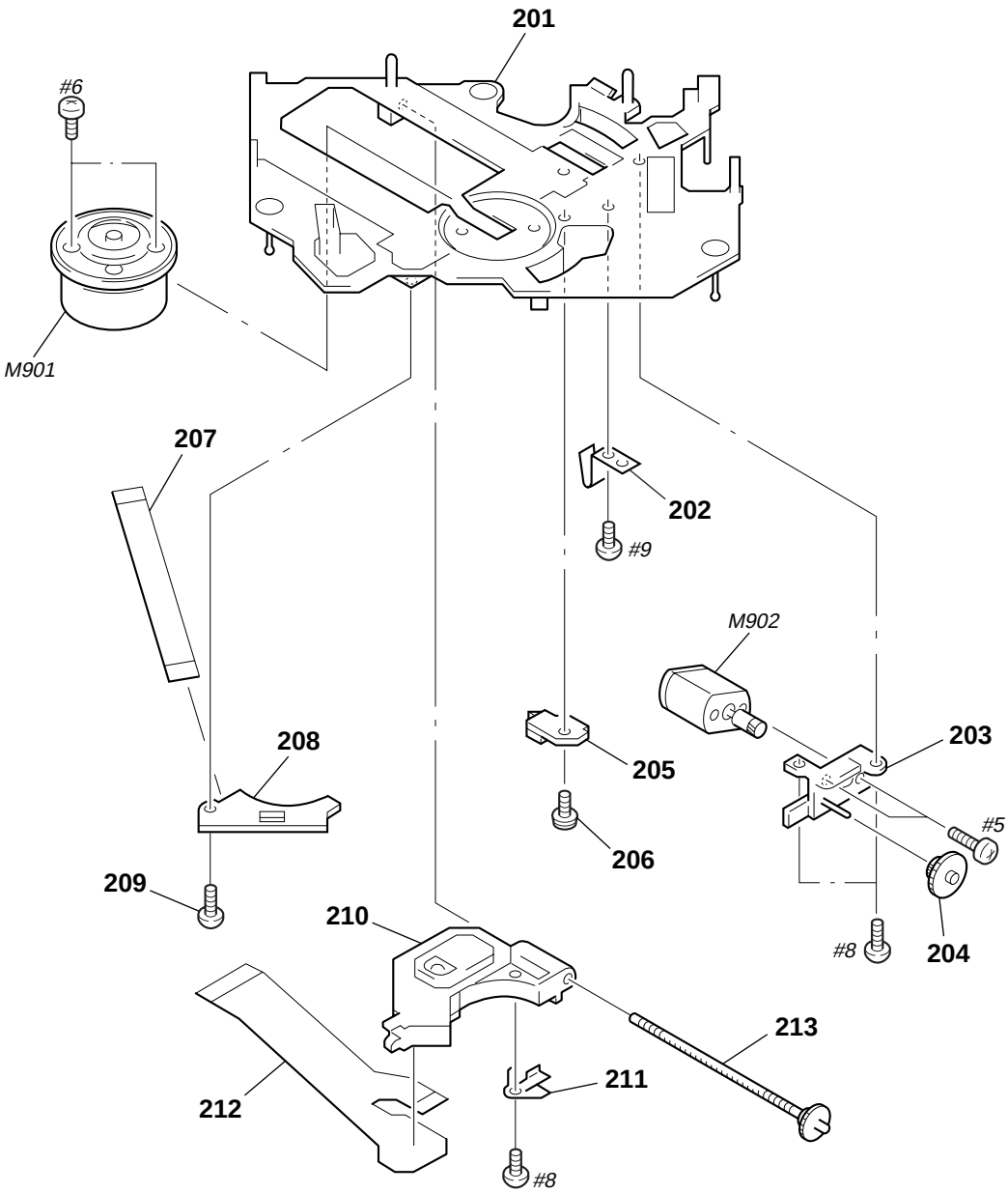
5-4. CD MECHANISM SECTION (2)
(MG-363T-121)



Ref. No.	Part No.	Description	Remark
151	3-931-893-01	ARM, CHUCKING	
152	3-931-897-01	DAMPER (T)	
153	3-931-879-02	LEVER (D)	
* 154	3-913-404-11	RETAINER (DISC)	
155	3-931-894-01	BRACKET (CP)	
156	3-931-895-01	SPRING (CH), TENSION	
157	3-931-898-01	SPRING (FL), COMPRESSION	
158	3-032-483-02	SPRING (KF1), TENSION	

Ref. No.	Part No.	Description	Remark
159	A-3277-802-C	CHASSIS (M) ASSY	
160	3-931-883-01	SPRING (TR), TENSION	
161	3-931-881-01	LEVER (LOCK)	
162	3-931-882-02	GEAR (MDL)	
163	3-007-537-11	WHEEL (U), WORM	
164	3-032-484-01	SPRING (KR1), TENSION	
165	3-014-727-01	WHEEL (LW), WORM	
166	3-018-272-01	WASHER	

5-5. CD MECHANISM SECTION (3)
(MG-363T-121)



The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 201	X-3374-022-1	CHASSIS (OP) (O/S) ASSY	
202	3-931-829-01	SPRING (SL), PLATE	
203	X-3371-504-1	BASE (DRIVING) ASSY	
204	3-931-832-01	GEAR (SL MIDWAY)	
* 205	1-659-835-12	LIMIT SW BOARD	
206	3-338-737-01	SCREW (2X3), + PS	
207	1-659-880-11	MOTOR FLEXIBLE BOARD	
* 208	1-659-834-11	SUB BOARD	
209	3-909-607-01	SCREW	
⚠ 210	8-820-010-06	PICK-UP, OPTICAL KSS-521A/K1RP	
211	3-931-834-01	SPRING (FEED), PLATE	
212	1-659-881-11	PICK-UP FLEXIBLE BOARD	
213	A-3291-669-A	SHAFT (FEED) ASSY	
M901	X-3371-664-2	MOTOR ASSY (SPINDLE)	
M902	A-3291-674-A	MOTOR ASSY, SLED (SLED)	

SECTION 6
ELECTRICAL PARTS LIST

DISC IN SW **DISPLAY**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
*	1-659-836-11	DISC IN SW BOARD	
		**********	
		< SWITCH >	
SW1	1-572-288-21	SWITCH, PUSH (DISC IN)	
SW2	1-572-288-21	SWITCH, PUSH (SELF)	
**********			
		DISPLAY BOARD	
		**********	
*	X-3376-697-1	HOLDER ASSY, LCD	
*	3-030-932-01	PLATE (LCD), GROUND	
*	3-030-933-01	SHEET (DIFFUSION)	
*	3-032-271-01	SHEET (S), LCD	
		< CAPACITOR >	
C501	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C502	1-110-501-11	CERAMIC CHIP 0.33uF 10% 16V	
C503	1-164-489-11	CERAMIC CHIP 0.22uF 10% 16V	
		< CONNECTOR >	
CNP501	1-774-945-11	PLUG, CONNECTOR 14P	
		< DIODE >	
D501	8-719-420-90	DIODE MA8051-M	
D502	8-719-420-90	DIODE MA8051-M	
D503	8-719-914-43	DIODE DAN202K	
D504	8-719-420-90	DIODE MA8051-M	
D505	8-719-422-64	DIODE MA8062-M	
D506	8-719-068-68	DIODE SDZ6V2WA	
		< IC >	
IC501	8-759-496-75	IC uPD16432BGC-018-9EU	
IC502	8-749-015-73	IC RPM6940-V4	
		< LIQUID CRYSTAL DISPLAY >	
LCD501	1-803-444-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< DIODE >	
LED501	8-719-987-45	LED CL-155Y/PG-CD	
LED502	8-719-987-45	LED CL-155Y/PG-CD	
LED503	8-719-987-45	LED CL-155Y/PG-CD	
LED504	8-719-987-45	LED CL-155Y/PG-CD	
LED505	8-719-987-45	LED CL-155Y/PG-CD	
LED510	8-719-073-89	LED NSPW315BS	
LED511	8-719-073-89	LED NSPW315BS	
		< SWITCH >	
LSW512	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (LIST)	
LSW513	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (DSPL)	
LSW514	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (10)	
LSW515	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (9)	
LSW516	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (8)	
LSW517	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (7)	
LSW518	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (6)	
LSW519	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (5)	
LSW520	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (4)	
LSW521	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (3)	
LSW531	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (OFF)	
LSW532	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOURCE)	
LSW534	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOUND)	
LSW535	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (MODE)	
LSW536	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SHIFT)	
LSW537	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (1)	
LSW538	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (2)	
		< TRANSISTOR >	
Q501	8-729-903-46	TRANSISTOR 2SB1132-P	
Q502	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q503	8-729-904-66	TRANSISTOR DTD113EK	
Q504	8-729-904-66	TRANSISTOR DTD113EK	
Q505	8-729-901-05	TRANSISTOR DTA124EK	
Q506	8-729-901-05	TRANSISTOR DTA124EK	
Q507	8-729-216-22	TRANSISTOR 2SA1162-G	
		< RESISTOR >	
R511	1-216-043-00	RES,CHIP 560 5% 1/10W	
R512	1-216-045-00	METAL CHIP 680 5% 1/10W	
R513	1-216-045-00	METAL CHIP 680 5% 1/10W	
R514	1-216-049-11	RES,CHIP 1K 5% 1/10W	
R515	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R516	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R517	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R518	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R519	1-216-065-00	RES,CHIP 4.7K 5% 1/10W	
R520	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R531	1-216-043-00	RES,CHIP 560 5% 1/10W	
R532	1-216-045-00	METAL CHIP 680 5% 1/10W	

DISPLAY **LIMIT SW** **LOAD SW** **MAIN**

Ref. No.	Part No.	Description			Remark
R533	1-216-045-00	METAL CHIP	680	5%	1/10W
R534	1-216-049-11	RES,CHIP	1K	5%	1/10W
R535	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R536	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R537	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R538	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R539	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R541	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R542	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R543	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R544	1-216-030-00	METAL CHIP	160	5%	1/10W
R555	1-216-041-00	METAL CHIP	470	5%	1/10W
R556	1-216-033-00	METAL CHIP	220	5%	1/10W
R560	1-216-121-00	RES,CHIP	1M	5%	1/10W
R561	1-216-093-00	RES,CHIP	68K	5%	1/10W
R562	1-216-049-11	RES,CHIP	1K	5%	1/10W
R563	1-216-049-11	RES,CHIP	1K	5%	1/10W
R564	1-216-049-11	RES,CHIP	1K	5%	1/10W
R565	1-216-049-11	RES,CHIP	1K	5%	1/10W
R566	1-216-089-00	RES,CHIP	47K	5%	1/10W
R567	1-216-089-00	RES,CHIP	47K	5%	1/10W
R568	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R569	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R570	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R571	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R572	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R573	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R574	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R581	1-216-033-00	METAL CHIP	220	5%	1/10W
R582	1-216-037-00	METAL CHIP	330	5%	1/10W
R583	1-216-025-00	RES,CHIP	100	5%	1/10W
R584	1-216-029-00	METAL CHIP	150	5%	1/10W
R585	1-216-025-00	RES,CHIP	100	5%	1/10W
R586	1-216-029-00	METAL CHIP	150	5%	1/10W
R587	1-216-025-00	RES,CHIP	100	5%	1/10W
R588	1-216-029-00	METAL CHIP	150	5%	1/10W
R589	1-216-025-00	RES,CHIP	100	5%	1/10W
R590	1-216-029-00	METAL CHIP	150	5%	1/10W
R591	1-216-033-00	METAL CHIP	220	5%	1/10W
R592	1-216-037-00	METAL CHIP	330	5%	1/10W
R593	1-216-049-11	RES,CHIP	1K	5%	1/10W
R594	1-216-049-11	RES,CHIP	1K	5%	1/10W
R599	1-216-025-00	RES,CHIP	100	5%	1/10W
		< ROTARY ENCODER >			
RE501	1-475-014-11	ENCODER, ROTARY			
		< SWITCH >			
S502	1-771-290-11	SWITCH, SLIDE (SEEK/AMS)			

****

Ref. No.	Part No.	Description			Remark
*	1-659-835-12	LIMIT SW BOARD			
		**********			
		< SWITCH >			
SW3	1-572-688-11	SWITCH, PUSH (1 KEY) (LIMIT)			

****

*	1-659-837-11	LOAD SW BOARD			
		**********			
		< SWITCH >			
SW4	1-572-288-21	SWITCH, PUSH (DOWN)			

****

*	A-3294-601-A	MAIN BOARD, COMPLETE			
		**********			
*	3-019-565-01	BRACKET (IC)			
*	3-030-928-01	HEAT SINK (REG)			
*	3-030-967-01	HEAT SINK			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-795-09	SCREW +PTT 2.6X12 (S)			
		< CAPACITOR >			
C101	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C104	1-164-346-11	CERAMIC CHIP	1uF		16V
C105	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C106	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C115	1-124-589-11	ELECT	47uF	20%	16V
C116	1-124-589-11	ELECT	47uF	20%	16V
C117	1-124-589-11	ELECT	47uF	20%	16V
C118	1-124-589-11	ELECT	47uF	20%	16V
C119	1-124-589-11	ELECT	47uF	20%	16V
C120	1-126-295-11	ELECT	10uF	20%	35V
C121	1-126-295-11	ELECT	10uF	20%	35V
C122	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C123	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C124	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C129	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C130	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C131	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C201	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C203	1-164-346-11	CERAMIC CHIP	1uF		16V
C204	1-164-346-11	CERAMIC CHIP	1uF		16V
C205	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C215	1-124-589-11	ELECT	47uF	20%	16V
C216	1-124-589-11	ELECT	47uF	20%	16V
C217	1-124-589-11	ELECT	47uF	20%	16V
C218	1-124-589-11	ELECT	47uF	20%	16V
C219	1-124-589-11	ELECT	47uF	20%	16V
C220	1-126-295-11	ELECT	10uF	20%	35V
C221	1-126-295-11	ELECT	10uF	20%	35V
C222	1-163-038-00	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C223	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C224	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C229	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C230	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C231	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C401	1-124-234-00	ELECT	22uF	20%	16V
C402	1-164-346-11	CERAMIC CHIP	1uF		16V
C403	1-124-257-00	ELECT	2.2uF	20%	50V
C404	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C406	1-124-584-00	ELECT	100uF	20%	10V
C407	1-164-346-11	CERAMIC CHIP	1uF		16V
C408	1-164-346-11	CERAMIC CHIP	1uF		16V
C409	1-126-936-11	ELECT	3300uF	20%	16V
C410	1-124-242-00	ELECT	33uF	20%	25V
C411	1-124-252-00	ELECT	0.33uF	20%	50V
C413	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C415	1-124-589-11	ELECT	47uF	20%	16V
C416	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C417	1-124-584-00	ELECT	100uF	20%	10V
C418	1-124-233-11	ELECT	10uF	20%	16V
C419	1-124-233-11	ELECT	10uF	20%	16V
C420	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C499	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C601	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C602	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C603	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C604	1-124-234-00	ELECT	22uF	20%	16V
C605	1-124-234-00	ELECT	22uF	20%	16V
C606	1-124-584-00	ELECT	100uF	20%	10V
C607	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C608	1-124-233-11	ELECT	10uF	20%	16V
C609	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C610	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C611	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C612	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C613	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C614	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C615	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C617	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C618	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C619	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C620	1-124-233-11	ELECT	10uF	20%	16V
C621	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C622	1-124-584-00	ELECT	100uF	20%	10V
C623	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C624	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C633	1-163-181-00	CERAMIC CHIP	100PF	5%	50V
C634	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C647	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C653	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C692	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C693	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C696	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C698	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C699	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C702	1-164-346-11	CERAMIC CHIP	1uF		16V
C703	1-124-233-11	ELECT	10uF	20%	16V
C704	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C705	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C707	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C708	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C709	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C710	1-124-233-11	ELECT	10uF	20%	16V
C718	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C719	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C720	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C801	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C802	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C803	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C810	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C811	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C812	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C813	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C814	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C815	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C816	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C817	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C818	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C819	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C903	1-124-233-11	ELECT	10uF	20%	16V
C904	1-128-057-11	ELECT	330uF	20%	6.3V
C910	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C912	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C913	1-126-160-11	ELECT	1uF	20%	50V
C914	1-110-654-11	ELECT(BLOCK)	0.047F		5.5V
C915	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C916	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C917	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C920	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C921	1-124-465-00	ELECT	0.47uF	20%	50V
C922	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C923	1-124-465-00	ELECT	0.47uF	20%	50V
C925	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C927	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

< JACK >

CNJ600	1-785-006-11	JACK (ANT)	
CNP802	1-764-270-21	JACK, STEREO MINIATURE (DIA.3.5)	(REMOTE IN)

< CONNECTOR >

*	CNP401	1-506-985-11	PIN, CONNECTOR (PC BOARD) 3P
	CNP501	1-774-701-11	PIN, CONNECTOR 16P
	CNP700	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P
*	CNP800	1-569-908-11	SOCKET, CONNECTOR 14P
	CNP801	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)

MAIN

Ref. No.	Part No.	Description	Remark
		< SURGE ABSORBER >	
CP601	1-803-335-21	ABSORBER, CHIP SURGE	
		< DIODE >	
D402	8-719-109-71	DIODE RD3.9ES-B1	
D403	8-719-914-43	DIODE DAN202K	
D601	8-719-977-03	DIODE DTZ5.6B	
D604	8-719-058-24	DIODE RB501V-40TE-17	
D701	8-719-914-44	DIODE DAP202K	
D702	8-719-991-33	DIODE 1SS133T-77	
D801	8-719-058-24	DIODE RB501V-40TE-17	
D807	8-719-977-12	DIODE DTZ6.8B	
D808	8-719-914-43	DIODE DAN202K	
D809	8-719-017-94	DIODE MA8180	
D810	8-719-017-94	DIODE MA8180	
D823	8-719-977-12	DIODE DTZ6.8B	
D824	8-719-977-12	DIODE DTZ6.8B	
D851	8-719-068-68	DIODE SDZ6V2WA	
D852	8-719-068-68	DIODE SDZ6V2WA	
D853	8-719-068-68	DIODE SDZ6V2WA	
D854	8-719-068-68	DIODE SDZ6V2WA	
D855	8-719-068-68	DIODE SDZ6V2WA	
D901	8-719-200-82	DIODE 11ES2	
D902	8-719-200-82	DIODE 11ES2	
D903	8-719-049-38	DIODE 1N5404TU	
D904	8-719-200-82	DIODE 11ES2	
D909	8-719-977-12	DIODE DTZ6.8B	
D910	8-719-017-91	DIODE MA8160	
D912	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D913	8-719-109-89	DIODE RD5.6ESB2	
D914	8-719-977-12	DIODE DTZ6.8B	
D915	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D916	8-719-921-80	DIODE MTZJ-11B	
D918	8-719-914-44	DIODE DAP202K	
D919	8-719-914-43	DIODE DAN202K	
D920	8-719-977-12	DIODE DTZ6.8B	
D924	8-719-200-82	DIODE 11ES2	
		< IC >	
IC200	8-759-490-74	IC TDA7384	
IC401	8-759-572-10	IC TDA7462D013TR	
IC402	8-759-444-50	IC TDA8574(T)	
IC403	8-759-444-50	IC TDA8574(T)	
IC406	8-759-909-71	IC BA4558FTR	
IC601	8-759-572-11	IC TDA7427AD1	
IC702	8-759-464-81	IC PCM1717E-ST2	
IC703	8-759-428-57	IC LC89170M-TLM	
IC801	8-759-572-16	IC MB90574PFV-G-179-BND	
IC803	8-759-449-89	IC BA8270F-E2	
IC901	8-759-572-12	IC BA4903	
IC902	8-759-363-81	IC XC61AN4002PR	

Ref. No.	Part No.	Description	Remark
		< JUMPER RESISTOR >	
JR602	1-216-295-00	SHORT 0	
JR611	1-216-295-00	SHORT 0	
JR614	1-216-295-00	SHORT 0	
JR616	1-216-295-00	SHORT 0	
JR620	1-216-295-00	SHORT 0	
JR621	1-216-295-00	SHORT 0	
JR622	1-216-295-00	SHORT 0	
JR624	1-216-295-00	SHORT 0	
JR702	1-216-295-00	SHORT 0	
JR710	1-216-295-00	SHORT 0	
JR722	1-216-295-00	SHORT 0	
JR765	1-216-295-00	SHORT 0	
JR855	1-216-295-00	SHORT 0	
JR856	1-216-295-00	SHORT 0	
		< COIL >	
L401	1-410-381-11	INDUCTOR CHIP 10uH	
L601	1-410-513-11	INDUCTOR 22uH	
L802	1-216-295-00	SHORT 0	
L901	1-416-539-11	INDUCTOR 370uH	
		< JACK >	
PJ400	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN, LINE OUT FRONT/REAR)	
		< TRANSISTOR >	
Q110	8-729-920-31	TRANSISTOR DTC343TK	
Q111	8-729-920-31	TRANSISTOR DTC343TK	
Q210	8-729-920-31	TRANSISTOR DTC343TK	
Q211	8-729-920-31	TRANSISTOR DTC343TK	
Q401	8-729-901-05	TRANSISTOR DTA124EK	
Q402	8-729-027-52	TRANSISTOR DTC124EKA-T146	
Q403	8-729-920-31	TRANSISTOR DTC343TK	
Q603	8-729-030-51	TRANSISTOR 2SA1515S-R-TP	
Q608	8-729-901-05	TRANSISTOR DTA124EK	
Q609	8-729-027-52	TRANSISTOR DTC124EKA-T146	
Q610	8-729-216-22	TRANSISTOR 2SA1162-G	
Q612	8-729-216-22	TRANSISTOR 2SA1162-G	
Q613	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q615	8-729-027-52	TRANSISTOR DTC124EKA-T146	
Q616	8-729-027-52	TRANSISTOR DTC124EKA-T146	
Q617	8-729-027-52	TRANSISTOR DTC124EKA-T146	
Q802	8-729-106-60	TRANSISTOR 2SB1115A	
Q803	8-729-620-06	TRANSISTOR 2SC3052-EF	
Q806	8-729-901-05	TRANSISTOR DTA124EK	
Q901	8-729-901-05	TRANSISTOR DTA124EK	
Q902	8-729-027-52	TRANSISTOR DTC124EKA-T146	
Q903	8-729-019-00	TRANSISTOR 2SD2394-G	
Q904	8-729-019-00	TRANSISTOR 2SD2394-G	
Q905	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q906	8-729-620-06	TRANSISTOR 2SC3052-EF	

Ref. No.	Part No.	Description			Remark
Q907	8-729-901-05	TRANSISTOR	DTA124EK		
Q908	8-729-027-52	TRANSISTOR	DTC124EKA-T146		
Q909	8-729-015-11	TRANSISTOR	2SD1802FAST-TL		
Q910	8-729-901-05	TRANSISTOR	DTA124EK		
Q911	8-729-027-52	TRANSISTOR	DTC124EKA-T146		
Q912	8-729-019-00	TRANSISTOR	2SD2394-G		
Q913	8-729-901-05	TRANSISTOR	DTA124EK		
Q914	8-729-901-05	TRANSISTOR	DTA124EK		
Q915	8-729-901-05	TRANSISTOR	DTA124EK		
Q916	8-729-620-06	TRANSISTOR	2SC3052-EF		
Q919	8-729-027-52	TRANSISTOR	DTC124EKA-T146		
Q924	8-729-101-07	TRANSISTOR	2SB798-DL		
Q925	8-729-027-52	TRANSISTOR	DTC124EKA-T146		
		< RESISTOR >			
R101	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W
R105	1-216-082-00	RES,CHIP	24K	5%	1/10W
R106	1-216-082-00	RES,CHIP	24K	5%	1/10W
R107	1-216-082-00	RES,CHIP	24K	5%	1/10W
R108	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R109	1-216-082-00	RES,CHIP	24K	5%	1/10W
R110	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R111	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R112	1-216-049-11	RES,CHIP	1K	5%	1/10W
R113	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R114	1-216-049-11	RES,CHIP	1K	5%	1/10W
R115	1-216-075-00	METAL CHIP	12K	5%	1/10W
R116	1-216-075-00	METAL CHIP	12K	5%	1/10W
R117	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R118	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R123	1-216-082-00	RES,CHIP	24K	5%	1/10W
R127	1-216-064-00	METAL CHIP	4.3K	5%	1/10W
R128	1-216-082-00	RES,CHIP	24K	5%	1/10W
R129	1-216-082-00	RES,CHIP	24K	5%	1/10W
R130	1-216-089-00	RES,CHIP	47K	5%	1/10W
R201	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R205	1-216-082-00	RES,CHIP	24K	5%	1/10W
R206	1-216-082-00	RES,CHIP	24K	5%	1/10W
R207	1-216-082-00	RES,CHIP	24K	5%	1/10W
R208	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R209	1-216-082-00	RES,CHIP	24K	5%	1/10W
R210	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R211	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R212	1-216-049-11	RES,CHIP	1K	5%	1/10W
R213	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R214	1-216-049-11	RES,CHIP	1K	5%	1/10W
R215	1-216-075-00	METAL CHIP	12K	5%	1/10W
R216	1-216-075-00	METAL CHIP	12K	5%	1/10W
R217	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R218	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R223	1-216-082-00	RES,CHIP	24K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R227	1-216-064-00	METAL CHIP	4.3K	5%	1/10W
R228	1-216-082-00	RES,CHIP	24K	5%	1/10W
R229	1-216-082-00	RES,CHIP	24K	5%	1/10W
R230	1-216-089-00	RES,CHIP	47K	5%	1/10W
R401	1-216-049-11	RES,CHIP	1K	5%	1/10W
R402	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R403	1-216-113-00	METAL CHIP	470K	5%	1/10W
R404	1-216-295-00	SHORT	0		
R405	1-216-295-00	SHORT	0		
R408	1-216-077-00	METAL CHIP	15K	5%	1/10W
R412	1-216-075-00	METAL CHIP	12K	5%	1/10W
R413	1-216-075-00	METAL CHIP	12K	5%	1/10W
R414	1-216-089-00	RES,CHIP	47K	5%	1/10W
R415	1-216-089-00	RES,CHIP	47K	5%	1/10W
R416	1-216-049-11	RES,CHIP	1K	5%	1/10W
R602	1-216-035-00	METAL CHIP	270	5%	1/10W
R603	1-216-083-00	METAL CHIP	27K	5%	1/10W
R605	1-216-079-00	METAL CHIP	18K	5%	1/10W
R607	1-216-097-00	RES,CHIP	100K	5%	1/10W
R608	1-216-025-00	RES,CHIP	100	5%	1/10W
R609	1-216-081-00	METAL CHIP	22K	5%	1/10W
R611	1-216-025-00	RES,CHIP	100	5%	1/10W
R612	1-216-089-00	RES,CHIP	47K	5%	1/10W
R613	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R614	1-216-295-00	SHORT	0		
R615	1-216-295-00	SHORT	0		
R616	1-216-089-00	RES,CHIP	47K	5%	1/10W
R618	1-216-049-11	RES,CHIP	1K	5%	1/10W
R628	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R630	1-216-097-00	RES,CHIP	100K	5%	1/10W
R631	1-216-097-00	RES,CHIP	100K	5%	1/10W
R632	1-216-049-11	RES,CHIP	1K	5%	1/10W
R637	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R638	1-216-097-00	RES,CHIP	100K	5%	1/10W
R639	1-216-077-00	METAL CHIP	15K	5%	1/10W
R642	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R694	1-216-017-00	RES,CHIP	47	5%	1/10W
R696	1-216-064-00	METAL CHIP	4.3K	5%	1/10W
R697	1-216-064-00	METAL CHIP	4.3K	5%	1/10W
R701	1-216-025-00	RES,CHIP	100	5%	1/10W
R702	1-216-025-00	RES,CHIP	100	5%	1/10W
R703	1-216-025-00	RES,CHIP	100	5%	1/10W
R705	1-216-033-00	METAL CHIP	220	5%	1/10W
R706	1-216-049-11	RES,CHIP	1K	5%	1/10W
R708	1-216-037-00	METAL CHIP	330	5%	1/10W
R710	1-216-027-00	METAL CHIP	120	5%	1/10W
R711	1-216-121-00	RES,CHIP	1M	5%	1/10W
R712	1-216-113-00	METAL CHIP	470K	5%	1/10W
R723	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R801	1-216-097-00	RES,CHIP	100K	5%	1/10W
R802	1-216-049-11	RES,CHIP	1K	5%	1/10W
R803	1-216-073-00	METAL CHIP	10K	5%	1/10W
R804	1-216-067-00	METAL CHIP	5.6K	5%	1/10W

MAIN **RELAY** **SERVO**

Ref. No.	Part No.	Description			Remark
R805	1-216-097-00	RES,CHIP	100K	5%	1/10W
R806	1-216-049-11	RES,CHIP	1K	5%	1/10W
R807	1-216-049-11	RES,CHIP	1K	5%	1/10W
R808	1-216-049-11	RES,CHIP	1K	5%	1/10W
R809	1-216-025-00	RES,CHIP	100	5%	1/10W
R810	1-216-025-00	RES,CHIP	100	5%	1/10W
R813	1-216-049-11	RES,CHIP	1K	5%	1/10W
R814	1-216-049-11	RES,CHIP	1K	5%	1/10W
R822	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R823	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R825	1-216-097-00	RES,CHIP	100K	5%	1/10W
R826	1-216-097-00	RES,CHIP	100K	5%	1/10W
R827	1-216-105-00	RES,CHIP	220K	5%	1/10W
R828	1-216-097-00	RES,CHIP	100K	5%	1/10W
R829	1-216-073-00	METAL CHIP	10K	5%	1/10W
R830	1-216-073-00	METAL CHIP	10K	5%	1/10W
R831	1-216-073-00	METAL CHIP	10K	5%	1/10W
R832	1-216-097-00	RES,CHIP	100K	5%	1/10W
R833	1-216-049-11	RES,CHIP	1K	5%	1/10W
R834	1-216-097-00	RES,CHIP	100K	5%	1/10W
R839	1-216-073-00	METAL CHIP	10K	5%	1/10W
R840	1-216-089-00	RES,CHIP	47K	5%	1/10W
R841	1-216-025-00	RES,CHIP	100	5%	1/10W
R842	1-216-097-00	RES,CHIP	100K	5%	1/10W
R843	1-216-073-00	METAL CHIP	10K	5%	1/10W
R844	1-216-025-00	RES,CHIP	100	5%	1/10W
R845	1-216-025-00	RES,CHIP	100	5%	1/10W
R846	1-216-097-00	RES,CHIP	100K	5%	1/10W
R847	1-216-097-00	RES,CHIP	100K	5%	1/10W
R848	1-216-097-00	RES,CHIP	100K	5%	1/10W
R856	1-216-025-00	RES,CHIP	100	5%	1/10W
R857	1-216-117-00	METAL CHIP	680K	5%	1/10W
R863	1-216-049-11	RES,CHIP	1K	5%	1/10W
R864	1-216-041-00	METAL CHIP	470	5%	1/10W
R865	1-216-041-00	METAL CHIP	470	5%	1/10W
R868	1-216-049-11	RES,CHIP	1K	5%	1/10W
R869	1-216-097-00	RES,CHIP	100K	5%	1/10W
R883	1-216-109-00	METAL CHIP	330K	5%	1/10W
R898	1-216-097-00	RES,CHIP	100K	5%	1/10W
R902	1-216-049-11	RES,CHIP	1K	5%	1/10W
R903	1-216-041-00	METAL CHIP	470	5%	1/10W
R904	1-216-073-00	METAL CHIP	10K	5%	1/10W
R905	1-216-049-11	RES,CHIP	1K	5%	1/10W
R906	1-216-097-00	RES,CHIP	100K	5%	1/10W
R907	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R908	1-216-033-00	METAL CHIP	220	5%	1/10W
R909	1-216-049-11	RES,CHIP	1K	5%	1/10W
R910	1-216-049-11	RES,CHIP	1K	5%	1/10W
R911	1-216-049-11	RES,CHIP	1K	5%	1/10W
R915	1-216-079-00	METAL CHIP	18K	5%	1/10W
R917	1-216-085-00	METAL CHIP	33K	5%	1/10W
R918	1-216-073-00	METAL CHIP	10K	5%	1/10W
R919	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R920	1-216-097-00	RES,CHIP	100K	5%	1/10W
R925	1-216-097-00	RES,CHIP	100K	5%	1/10W
R928	1-216-049-11	RES,CHIP	1K	5%	1/10W
R936	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R937	1-216-097-00	RES,CHIP	100K	5%	1/10W
R999	1-216-097-00	RES,CHIP	100K	5%	1/10W

< SWITCH >

S900	1-762-638-11	SWITCH, TACTILE (RESET)
S901	1-571-754-31	SWITCH, PUSH (1 KEY) (NOSE DET)

< THERMISTOR (POSITIVE) >

TH801	1-801-792-21	THERMISTOR, POSITIVE

< TUNER >

TU601	A-3282-045-A	TUNER UNIT (TUX-012(E))

< VIBRATOR >

X601	1-781-258-11	VIBRATOR, CRYSTAL (10.25MHz)
X700	1-579-345-11	VIBRATOR, CERAMIC (16.9344MHz)
X800	1-767-833-21	VIBRATOR, CERAMIC (4.19MHz)
X801	1-567-098-41	VIBRATOR, CRYSTAL (32kHz)

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*	1-672-515-11	RELAY BOARD
		**********
	1-790-482-11	CABLE, FLAT (FFC) 14P

< CONNECTOR >

CNP502	1-774-944-11	SOCKET, CONNECTOR 14P

< DIODE >

LED506	8-719-033-14	LED CL-170PG-CD-T (CD WINDOW)
LED507	8-719-033-14	LED CL-170PG-CD-T (⏏)

< SWITCH >

LSW511	1-762-619-21	SWITCH, KEY BOARD (WITH LED) (⏏)

< RESISTOR >

R530	1-216-033-00	METAL CHIP	220	5%	1/10W

****

*	A-3309-694-A	SERVO BOARD, COMPLETE
		**********

< CAPACITOR >

C1	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C2	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C3	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C4	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V

Ref. No.	Part No.	Description			Remark
C6	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C7	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C9	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C10	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C11	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C12	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C13	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C14	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C15	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C16	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C17	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C18	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C19	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C20	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C21	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C22	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C23	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C24	1-163-259-00	CERAMIC CHIP	220PF	5%	50V
C25	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C26	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C27	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C28	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C29	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C30	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C31	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C32	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C33	1-124-779-00	ELECT CHIP	10uF	20%	16V
C34	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C35	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C36	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C37	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C38	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C39	1-126-204-11	ELECT CHIP	47uF	20%	16V
C40	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN1	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P			
CN2	1-565-728-51	CONNECTOR, FPC 17P			
CN3	1-770-347-21	CONNECTOR, FPC 6P			
		< DIODE >			
D1	8-719-420-51	DIODE MA729			
D2	8-719-420-51	DIODE MA729			
		< IC >			
IC1	8-752-372-94	IC CXD2507AQ			
IC2	8-752-074-34	IC CXA1782BQ			
IC3	8-759-354-16	IC BA6796FP-T1			
		< JUMPER RESISTOR >			
JR01	1-216-296-00	SHORT	0		
JR03	1-216-296-00	SHORT	0		
JR04	1-216-296-00	SHORT	0		

Ref. No.	Part No.	Description		Remark
JR05	1-216-296-00	SHORT	0	
JR06	1-216-296-00	SHORT	0	
JR07	1-216-296-00	SHORT	0	
JR08	1-216-296-00	SHORT	0	
JR09	1-216-296-00	SHORT	0	
JR10	1-216-296-00	SHORT	0	
JR11	1-216-296-00	SHORT	0	
JR12	1-216-296-00	SHORT	0	
JR13	1-216-296-00	SHORT	0	
JR14	1-216-296-00	SHORT	0	
JR15	1-216-296-00	SHORT	0	
JR16	1-216-296-00	SHORT	0	
JR17	1-216-296-00	SHORT	0	
JR18	1-216-296-00	SHORT	0	
JR19	1-216-296-00	SHORT	0	
JR20	1-216-296-00	SHORT	0	
JR21	1-216-296-00	SHORT	0	
JR22	1-216-296-00	SHORT	0	
JR23	1-216-296-00	SHORT	0	
JR24	1-216-296-00	SHORT	0	
JR25	1-216-296-00	SHORT	0	
JR26	1-216-296-00	SHORT	0	
JR27	1-216-296-00	SHORT	0	
JR28	1-216-296-00	SHORT	0	
JR29	1-216-296-00	SHORT	0	
JR30	1-216-296-00	SHORT	0	
JR31	1-216-296-00	SHORT	0	
JR32	1-216-296-00	SHORT	0	
JR33	1-216-296-00	SHORT	0	
JR34	1-216-296-00	SHORT	0	
JR35	1-216-296-00	SHORT	0	
JR36	1-216-296-00	SHORT	0	
JR37	1-216-296-00	SHORT	0	
JR38	1-216-296-00	SHORT	0	
JR40	1-216-296-00	SHORT	0	
JR41	1-216-296-00	SHORT	0	
JR42	1-216-296-00	SHORT	0	
JR43	1-216-296-00	SHORT	0	
JR44	1-216-296-00	SHORT	0	
JR45	1-216-296-00	SHORT	0	
JR46	1-216-296-00	SHORT	0	
JR47	1-216-296-00	SHORT	0	
JR48	1-216-296-00	SHORT	0	
JR49	1-216-296-00	SHORT	0	
JR50	1-216-296-00	SHORT	0	
JR51	1-216-296-00	SHORT	0	
JR52	1-216-296-00	SHORT	0	
JR53	1-216-296-00	SHORT	0	
JR54	1-216-296-00	SHORT	0	
JR55	1-216-296-00	SHORT	0	
JR56	1-216-296-00	SHORT	0	
JR57	1-216-296-00	SHORT	0	
JR58	1-216-296-00	SHORT	0	

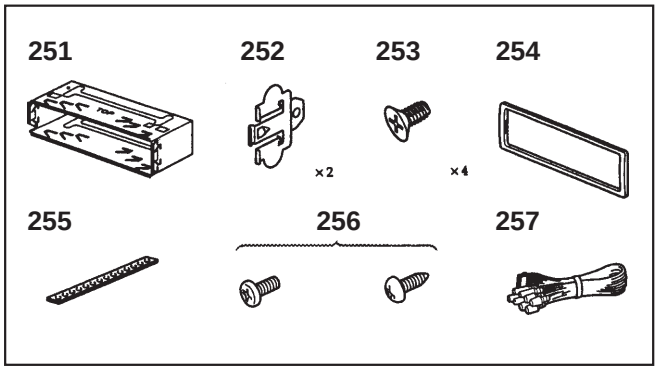
SERVO SUB

Ref. No.	Part No.	Description			Remark
JR59	1-216-296-00	SHORT	0		
JR60	1-216-296-00	SHORT	0		
JR61	1-216-296-00	SHORT	0		
JR62	1-216-296-00	SHORT	0		
JR63	1-216-296-00	SHORT	0		
JR64	1-216-296-00	SHORT	0		
JR65	1-216-296-00	SHORT	0		
JR66	1-216-296-00	SHORT	0		
JR67	1-216-296-00	SHORT	0		
JR68	1-216-296-00	SHORT	0		
JR69	1-216-296-00	SHORT	0		
JR70	1-216-296-00	SHORT	0		
JR71	1-216-296-00	SHORT	0		
		< COIL >			
L1	1-412-058-11	INDUCTOR CHIP	10uH		
L2	1-412-058-11	INDUCTOR CHIP	10uH		
L3	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q1	8-729-033-65	FET 2SJ204-T1B			
Q2	8-729-904-86	TRANSISTOR	2SB1197K-Q		
Q3	8-729-025-41	TRANSISTOR	UPA602T-T2		
Q4	8-729-025-41	TRANSISTOR	UPA602T-T2		
Q5	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
Q6	8-729-025-41	TRANSISTOR	UPA602T-T2		
		< RESISTOR >			
R1	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2	1-216-097-00	RES,CHIP	100K	5%	1/10W
R3	1-216-121-00	RES,CHIP	1M	5%	1/10W
R4	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R5	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R6	1-216-073-00	METAL CHIP	10K	5%	1/10W
R7	1-216-009-00	RES,CHIP	22	5%	1/10W
R8	1-216-119-00	METAL CHIP	820K	5%	1/10W
R9	1-216-119-00	METAL CHIP	820K	5%	1/10W
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W
R11	1-216-073-00	METAL CHIP	10K	5%	1/10W
R14	1-216-085-00	METAL CHIP	33K	5%	1/10W
R15	1-216-085-00	METAL CHIP	33K	5%	1/10W
R16	1-216-077-00	METAL CHIP	15K	5%	1/10W
R17	1-216-081-00	METAL CHIP	22K	5%	1/10W
R19	1-216-079-00	METAL CHIP	18K	5%	1/10W
R20	1-216-105-00	RES,CHIP	220K	5%	1/10W
R21	1-216-105-00	RES,CHIP	220K	5%	1/10W
R22	1-216-085-00	METAL CHIP	33K	5%	1/10W
R23	1-216-121-00	RES,CHIP	1M	5%	1/10W
R24	1-216-073-00	METAL CHIP	10K	5%	1/10W
R27	1-216-295-00	SHORT	0		
R28	1-216-101-00	METAL CHIP	150K	5%	1/10W
R29	1-216-097-00	RES,CHIP	100K	5%	1/10W
R30	1-216-097-00	RES,CHIP	100K	5%	1/10W
R31	1-216-081-00	METAL CHIP	22K	5%	1/10W
R32	1-216-109-00	METAL CHIP	330K	5%	1/10W
R33	1-216-105-00	RES,CHIP	220K	5%	1/10W
R34	1-216-009-00	RES,CHIP	22	5%	1/10W
R35	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R36	1-216-097-00	RES,CHIP	100K	5%	1/10W
R37	1-216-117-00	METAL CHIP	680K	5%	1/10W
R38	1-216-109-00	METAL CHIP	330K	5%	1/10W
R39	1-216-101-00	METAL CHIP	150K	5%	1/10W
R40	1-216-114-00	RES,CHIP	510K	5%	1/10W
R41	1-216-093-00	RES,CHIP	68K	5%	1/10W
R42	1-216-107-00	METAL CHIP	270K	5%	1/10W
R43	1-216-097-00	RES,CHIP	100K	5%	1/10W
R44	1-216-085-00	METAL CHIP	33K	5%	1/10W
R45	1-216-081-00	METAL CHIP	22K	5%	1/10W
R46	1-216-097-00	RES,CHIP	100K	5%	1/10W
R47	1-216-105-00	RES,CHIP	220K	5%	1/10W
R48	1-216-073-00	METAL CHIP	10K	5%	1/10W
R49	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R50	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R51	1-216-295-00	SHORT	0		
R56	1-216-121-00	RES,CHIP	1M	5%	1/10W
R57	1-216-121-00	RES,CHIP	1M	5%	1/10W
R58	1-216-121-00	RES,CHIP	1M	5%	1/10W
R59	1-216-089-00	RES,CHIP	47K	5%	1/10W
R60	1-216-089-00	RES,CHIP	47K	5%	1/10W
R61	1-208-291-11	RES,CHIP	4.7M	5%	1/10W
R62	1-208-291-11	RES,CHIP	4.7M	5%	1/10W
		< CERMET RESISTOR >			
RV1	1-238-091-11	RES, ADJ, CERMET	22K		
RV4	1-238-091-11	RES, ADJ, CERMET	22K		
**********					
*	1-659-834-11	SUB BOARD			
		**********			
		< CONNECTOR >			
CN1	1-770-347-21	CONNECTOR, FPC 6P			
**********					
		MISCELLANEOUS			
		**********			
8	1-790-375-11	CORD (WITH CONNECTOR) (SUB OUT)			
14	1-776-207-82	CORD (WITH CONNECTOR) (POWER)			
207	1-659-880-11	MOTOR FLEXIBLE BOARD			
⚠210	8-820-010-06	PICK-UP, OPTICAL KSS-521A/K1RP			
212	1-659-881-11	PICK-UP FLEXIBLE BOARD			
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A			
M901	X-3371-664-2	MOTOR ASSY (SPINDLE)			
M902	A-3291-674-A	MOTOR ASSY, SLED (SLED)			
M903	A-3291-676-A	MOTOR SUB ASSY, LOADING (LOADING)			
**********					

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-865-912-11	MANUAL, INSTRUCTION (ENGLISH)	
	3-865-914-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH)	
	X-3374-810-1	CASE ASSY	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#3	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
#4	7-685-795-09	SCREW +PTT 2.6X12 (S)	
#5	7-627-850-28	SCREW, PRECISION +P 1.4X3	
#6	7-627-000-00	SCREW, PRECISION +P 1.7X2.2 TYPE3	
#7	7-628-253-00	SCREW +PS 2X4	
#8	7-627-553-37	SCREW, PRECISION +P 2X3 TYPE3	
#9	7-627-553-17	SCREW, PRECISION +P 2X2 TYPE3	
#10	7-621-772-10	SCREW +B 2X4	
**********			

Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
251	3-014-370-21	FRAME, FITTING	
252	3-030-929-01	SPRING, FITTING	
253	3-934-325-01	SCREW (+K 5X8 TP)	
254	3-030-940-01	COLLAR	
255	3-916-012-01	BRACKET (ND), FITTING ASSIST	
256	X-3368-725-1	SCREW ASSY, FITTING	
257	1-776-207-82	CORD (WITH CONNECTOR) (POWER)	



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